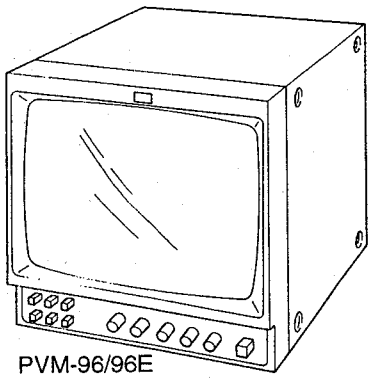
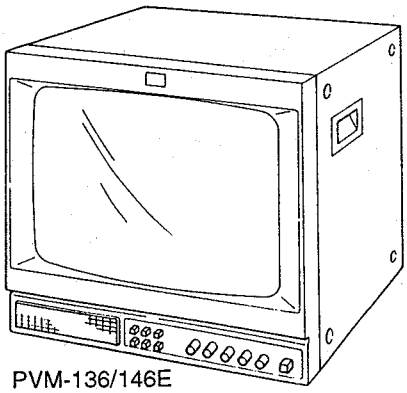
PVM-96/96E/136/146E

SERVICE MANUAL

US Model
Canadian Model
PVM-96/136
AEP Model
PVM-96E/146E


PVM-96/96E


PVM-136/146E

SPECIFICATIONS

Video signal

Resolution	PVM-96/96E: 900 TV lines PVM-136/146E: 1000 TV lines
Frequency response	10.0 MHz (Less than –3.0 dB)

Picture performance

Normal scan	8% overscan of CRT effective screen area
Underscan (PVM-96/96E, PVM-136/146E only)	3% underscan of CRT effective screen area
H. linearity	Less than 8.0% (typical)
V. linearity	Less than 7.0% (typical)
Color temperature	6500K

Inputs and Outputs

Inputs	VIDEO IN (LINE A, LINE B): BNC connectors, 1 Vp-p, sync negative AUDIO IN (LINE A, LINE B): phono jacks EXT SYNC: BNC connector, 4 Vp-p, sync negative
Loop-through outputs	VIDEO OUT (LINE A, LINE B): BNC connectors, 75 ohms terminated AUDIO OUT (LINE A, LINE B): phono jacks EXT SYNC: BNC connector, 75 ohms terminated
Remote input	REMOTE: 8-pin mini DIN connector (See the figure in "Pin assignment".)

General

Picture tube	PVM-96/96E: 21.7-cm (8⅝ inches) picture measured diagonally 23.7-cm (9⅜ inches) picture tube measured diagonally PVM-136/146E: 32.1-cm (12⅝ inches picture measured diagonally 34.8-cm (13¾ inches) picture tube measured diagonally
Power consumption	PVM-96: 28 W Max. PVM-96E: 0.3 – 0.18 A, 26 W. PVM-136: 30 W Max. PVM-146E: 0.3 – 0.18 A, 28 W. PVM-96/136: 120 V AC, 50/60 Hz

–Continued on next page–

BLACK AND WHITE VIDEO MONITOR

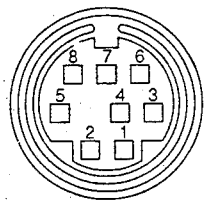
SONY®

MICROFILM

Power requirements PVM-96E/146E:
100 – 240 V AC, 50/60 Hz
Operating temperature range
0 – 35°C (32 –95°F)
Storage temperature range
–10 – 40°C (14 –104°F)
Humidity 0 – 90%
Dimensions PVM-96/96E:
Approx. 217 × 218 × 250 mm (w/h/d)
($8^5/_8 \times 8^5/_8 \times 9^7/_8$ inches)
PVM-136/146E:
Approx. 346 × 340 × 330 mm (w/h/d)
($13^5/_8 \times 13^1/_2 \times 13$ inches)
not incl. projecting parts and controls
Mass PVM-96/96E: Approx. 5.5kg
(12 lb 2 oz)
PVM-136/146E: Approx. 11kg
(24 lb 4 oz)
Accessories supplied
AC power cord (1)
AC plug holder (1 set)
Cable with on 8pin connector (1)

Pin assignment

REMOTE connector (8-pin mini DIN)



Pin No.	Signal
1	LINE
2	INT/EXT SYNC
3	GND
4	16:9
5	H/V delay
6	Notch
7	Tally
8	Underscan

For remote control, connect the pin of the desired function to pin 3 (GND).

Design and specifications are subject to change without notice.

SAFETY CHECK-OUT

(US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.

2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.

3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.

4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair Point them out to the customer and recommend their replacement.

5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.

6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.

7. Check the condition of the monopole antenna (if any). Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.

8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.

9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a coldwater pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

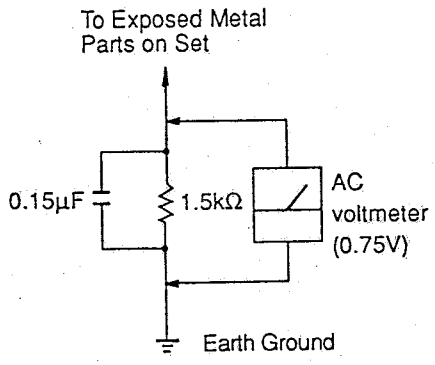


Fig. A. Using an AC voltmeter to check AC leakage.

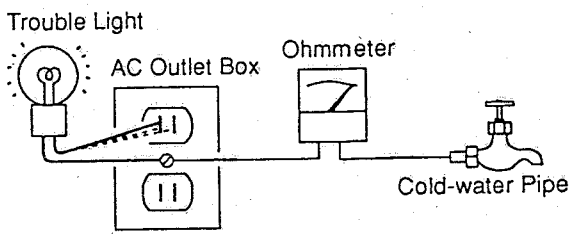


Fig. B. Checking for earth ground.

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(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

(ATTENTION)

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURTCIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ Á L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS ÁLA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MAPQUE ⚠ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIECES CONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

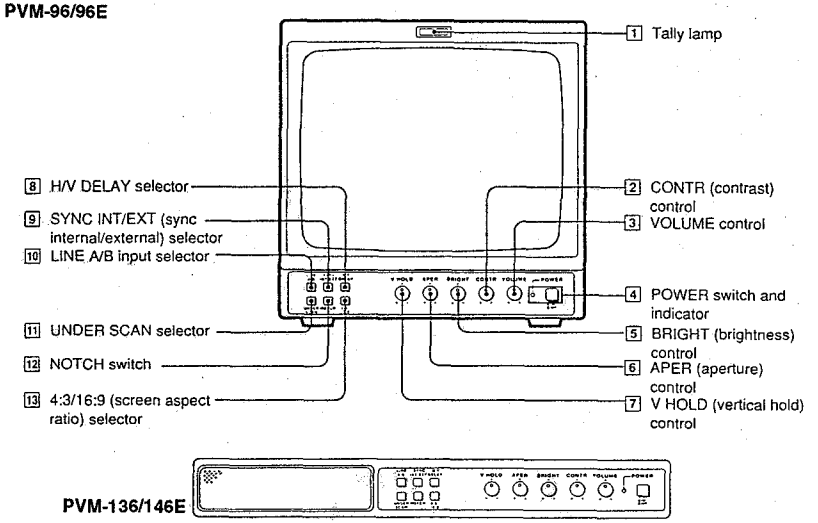
SECTION 1
GENERAL

Location and Function of Parts and Controls

Location and Function of Parts and Controls

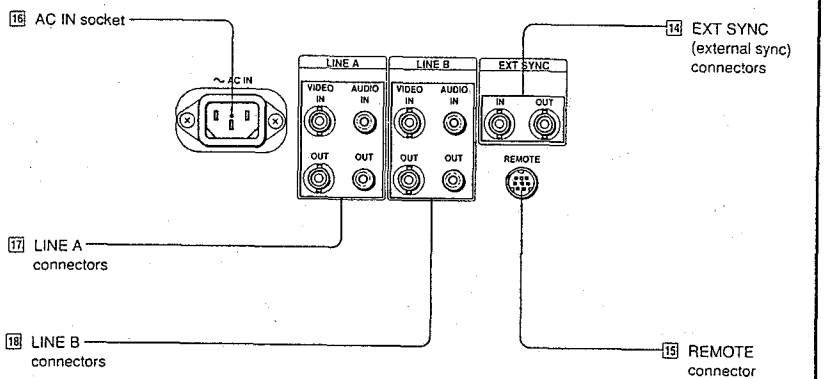
Front

PVM-96/96E


1 Tally lamp
8 H/V DELAY selector
9 SYNC INT/EXT (sync internal/external) selector
10 LINE A/B input selector
11 UNDER SCAN selector
12 NOTCH switch
13 4:3/16:9 (screen aspect ratio) selector
2 CONTR (contrast) control
3 VOLUME control
4 POWER switch and indicator
5 BRIGHT (brightness) control
6 APER (aperture) control
7 V HOLD (vertical hold) control

PVM-136/146E

Rear



1 **Tally lamp**

2 **CONTR (contrast) control**
Turn clockwise to make the contrast stronger and counterclockwise to make it weaker.

3 **VOLUME control**
Turn this control clockwise or conterclockwise to obtain the desired volume.

4 **POWER switch and indicator**
Depress to turn the monitor on. The indicator will light up in green.

5 **BRIGHT (brightness) control**
Turn clockwise for more brightness and counterclockwise for less.

6 **APER (aperture) control**
Turn clockwise for more sharpness and counterclockwise for less.

7 **V HOLD (vertical hold) control**
Turn to stabilize the picture if it rolls vertically.

8 **H/V DELAY selector**
Depress this button to observe the horizontal and vertical sync signals at the same time. The horizontal sync signal is displayed in the left quarter of the screen; the vertical sync signal is displayed near the center of

9 **SYNC INT/EXT (sync internal/external) selector**
Keep this button released (INT) to operate the monitor on the sync signal from the displayed composite video signal.
Depress this button (EXT) to operate the monitor on an external sync signal fed through the EXT SYNC connector on the rear panel.

10 **LINE A/B input selector**
Keep this button released (A) for a signal fed through the LINE A connectors. Depress this button (B) for a signal fed through the LINE B connectors.

11 **UNDER SCAN selector**
Depress this button for underscanning. The display size is reduced by approximately 3% so that four corners of the raster are visible.

12 **NOTCH switch**
Normally keep this switch released (off) to obtain fine picture details without spill or noise.
Depress this switch (on), when stripes appear because of color video signals fed through the connected equipment.

13 **4:3/16:9 (screen aspect ratio) selector**
Normally keep this button released to view the screen with a 4:3 aspect ratio.
Depress this button to view the screen with a 16:9 aspect ratio.

14 **EXT SYNC (external sync) connectors**
IN (BNC): When this monitor operates on an external sync signal, connect the reference signal from a sync generator to this connector. In this case, depress the SYNC INT/EXT selector on the front panel (EXT).
OUT (BNC): Loop-through output of the EXT SYNC IN connector. Connect to the external sync input of video equipment to be synchronized with this monitor.

15 **REMOTE connector (8-pin mini DIN)**
Connecting this connector to a switcher enables power on/off control.
For PVM-96E/146E, this connector can also be used for connecting to the tally output of a control console, special-effect generator, etc. The tally lamp on the front panel will be turned on and off by the connected equipment. For this connector's pin assignment, see "Specifications" on page 6.

16 **AC IN socket**
Connect the AC power cord (supplied) to this socket and to a wall outlet.

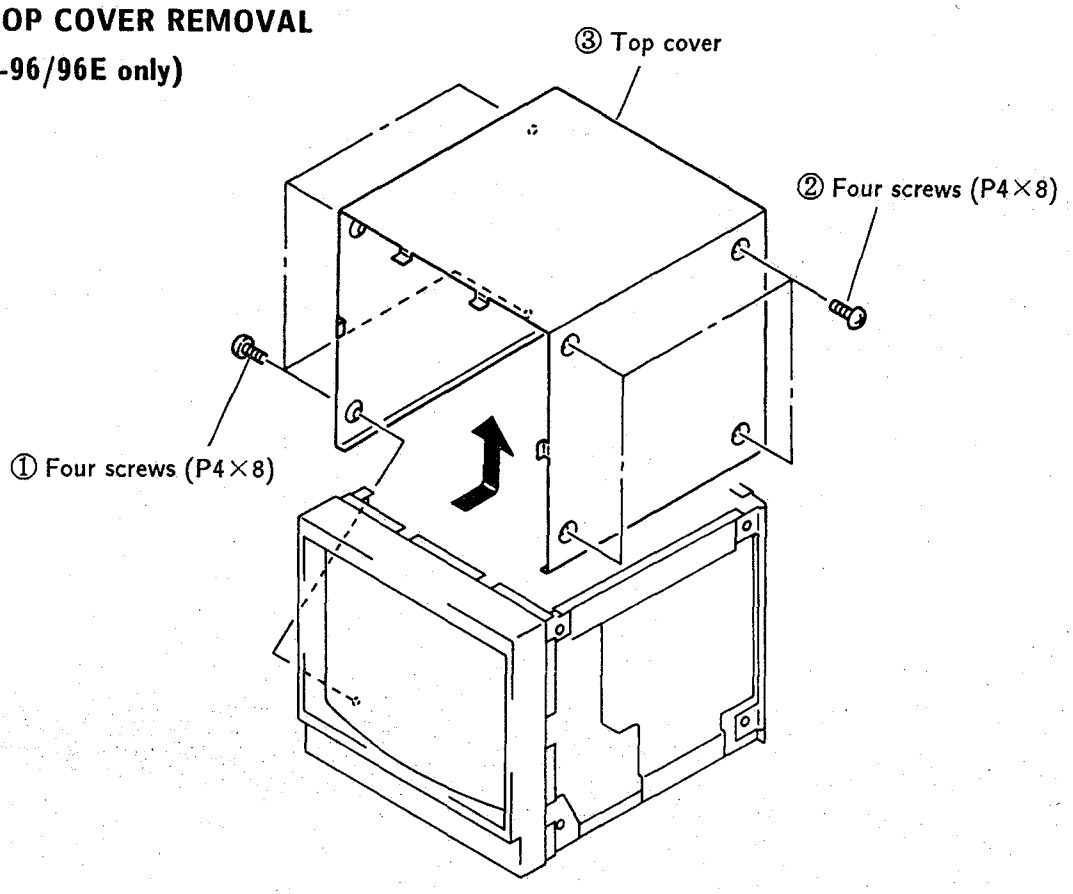
17 **LINE A connectors**
To monitor a signal fed through these connectors, keep the LINE A/B input selector released on the front panel.
VIDEO IN (BNC): Connect to the video output of a video camera, VCR or other video equipment.
VIDEO OUT (BNC): Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.
AUDIO IN (phono jack): Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).
AUDIO OUT (phono jack): Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

18 **LINE B connectors**
To monitor a signal fed through these connectors, depress the LINE A/B input selector on the front panel.
VIDEO IN (BNC): Connect to the video output of a video camera, VCR or other video equipment.
VIDEO OUT (BNC): Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.
AUDIO IN (phono jack): Connect to the radio output of a VCR or a microphone (through a suitable microphone amplifier).
AUDIO OUT (phono jack): Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

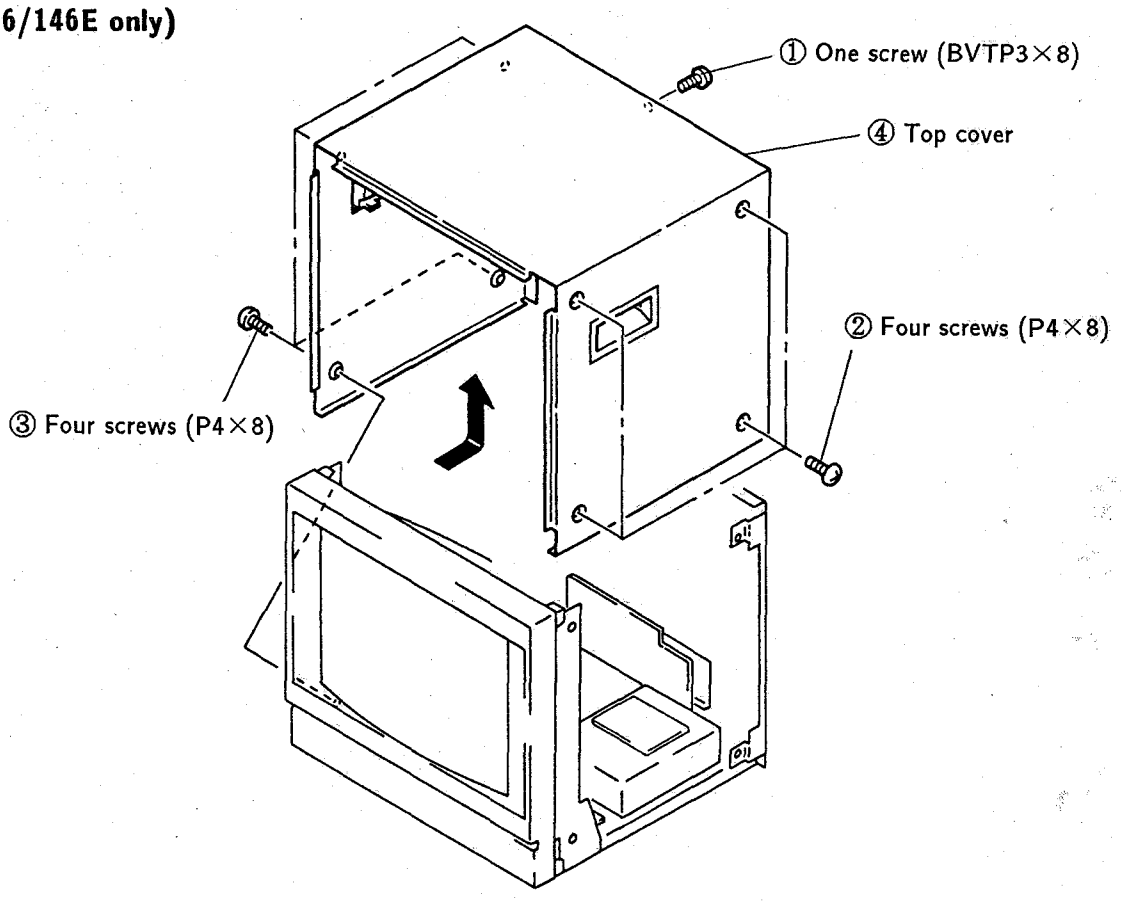
SECTION 2
DISASSEMBLY

2-1. TOP COVER REMOVAL

(PVM-96/96E only)

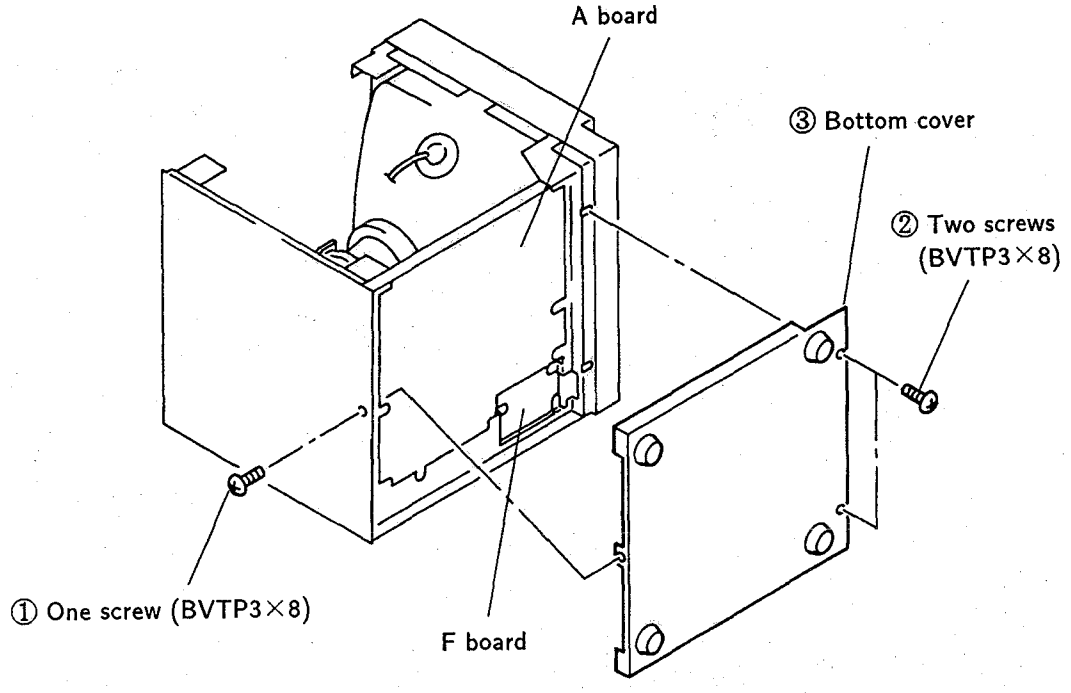


(PVM-136/146E only)

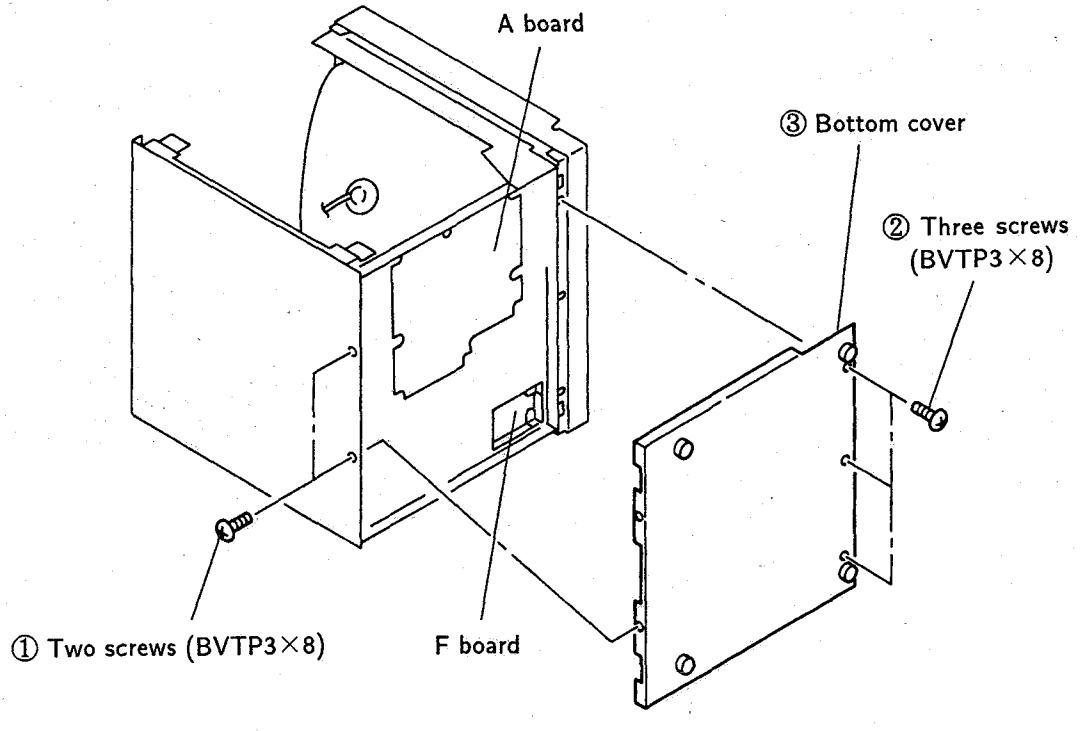


2-2. SERVICE POSITION

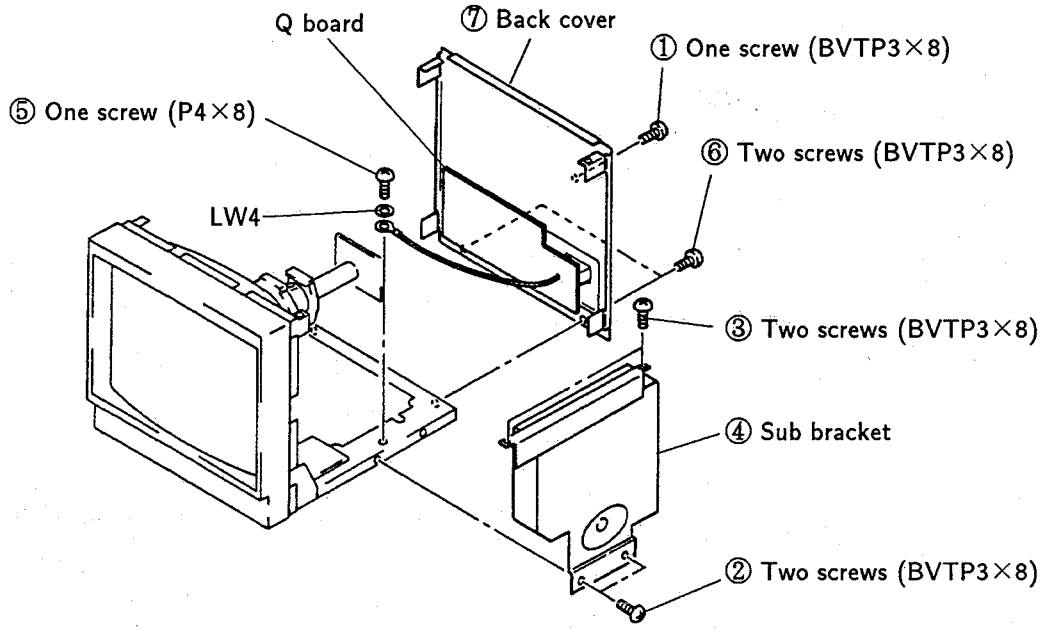
(PVM-96/96E only)



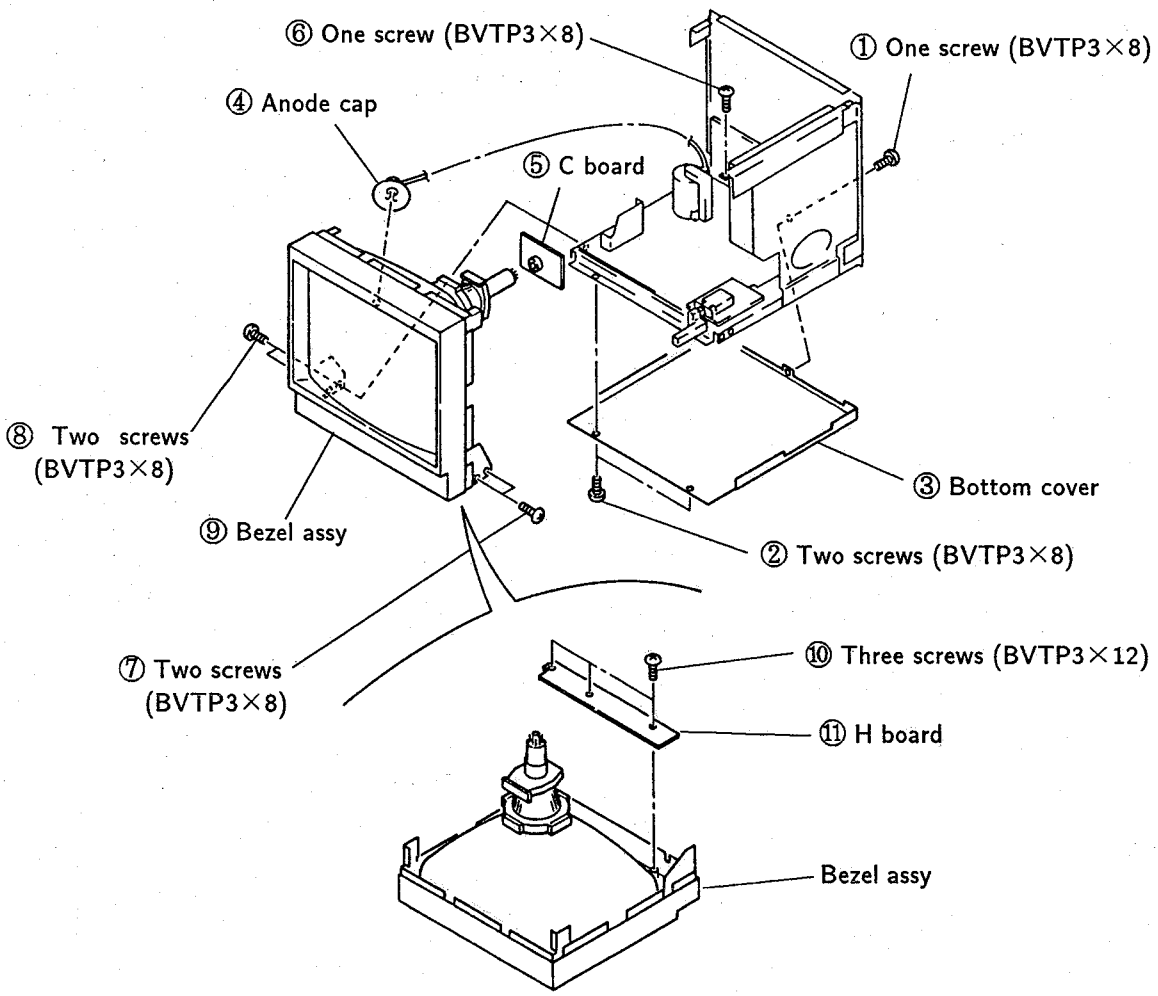
(PVM-136/146E only)



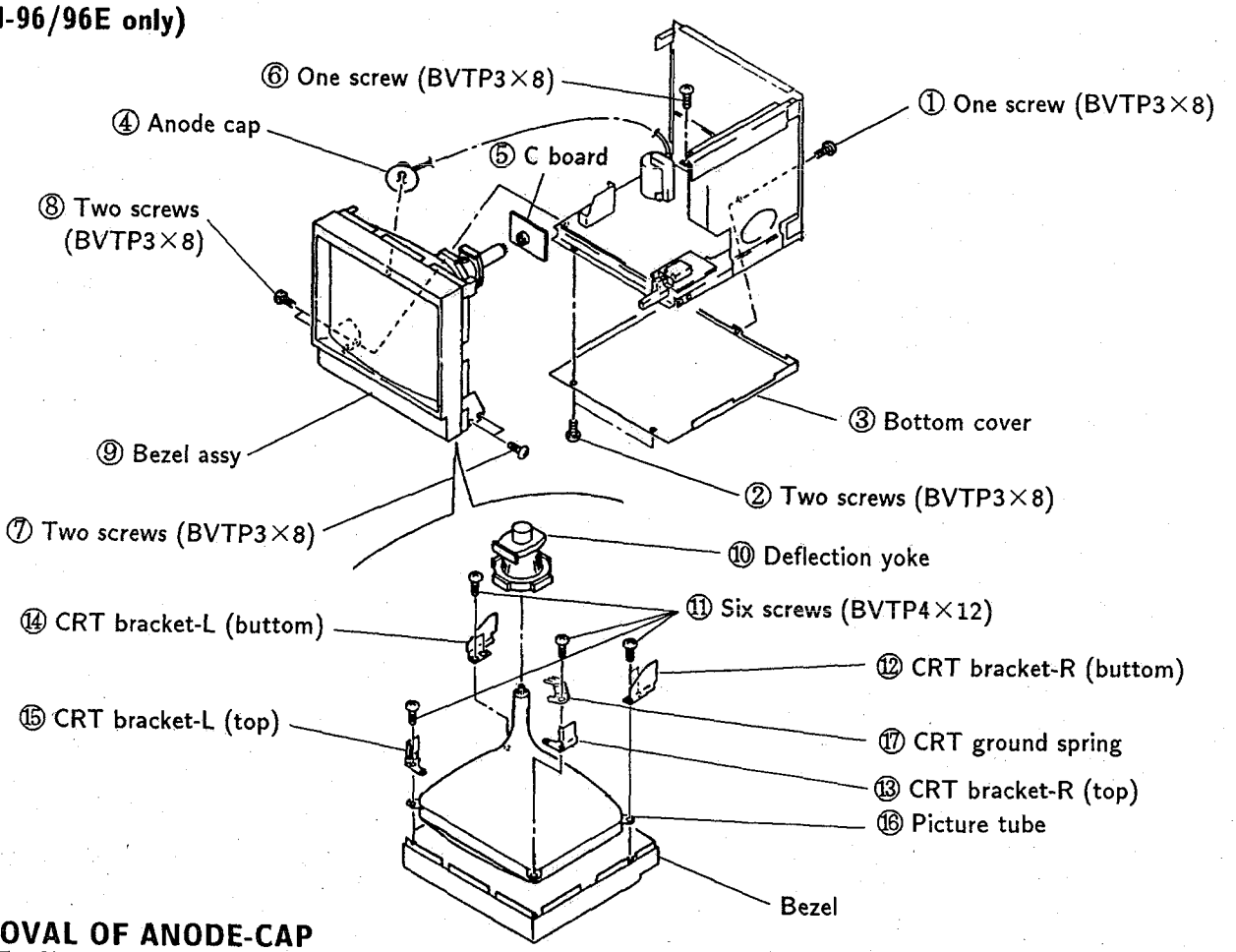
2-3. Q BOARD REMOVAL (PVM-96/96E only)



2-4. H BOARD REMOVAL (PVM-96/96E only)



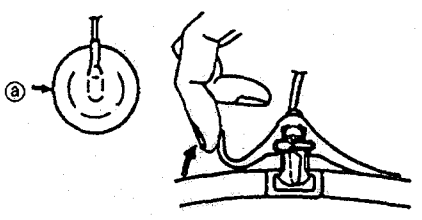
2-5. PICTURE TUBE REMOVAL (PVM-96/96E only)



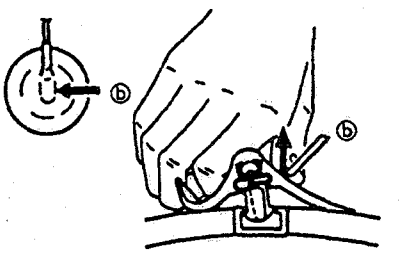
• REMOVAL OF ANODE-CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT chield or carbon painted on the CRT, after removing the anode.

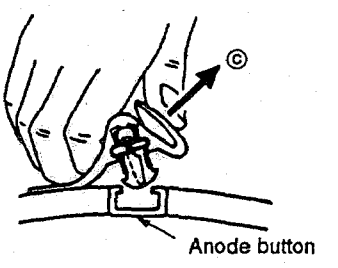
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.



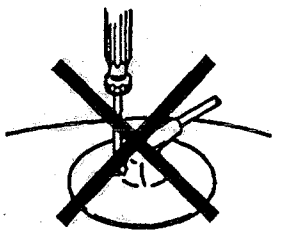
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

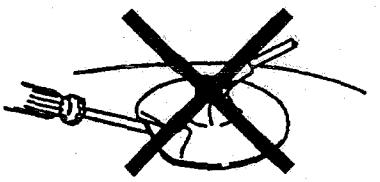
• HOW TO HANDLE AN ANODE-CAP

① Don't hurt the surface of anode-caps with sharp shaped material!

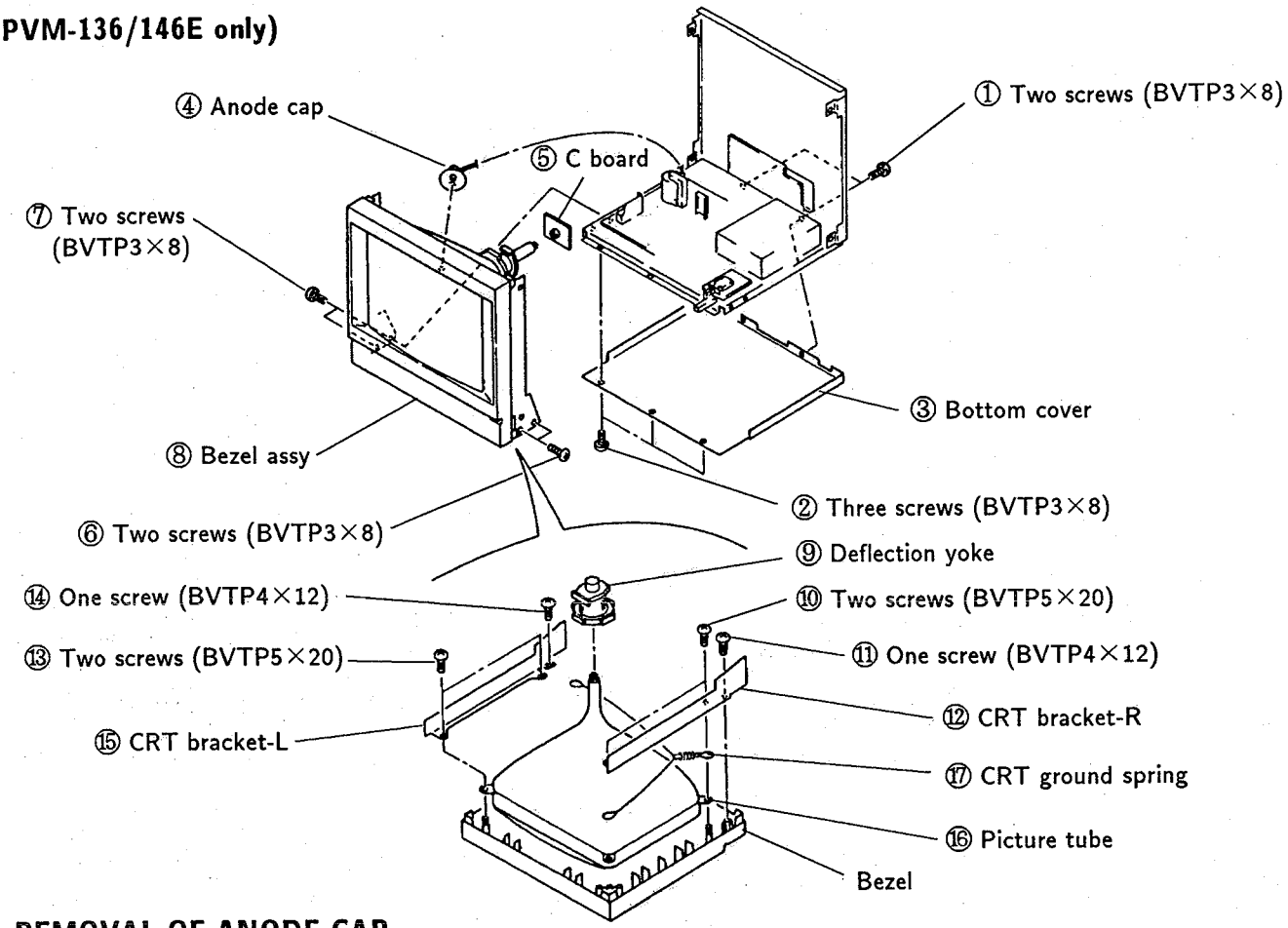
② Don't press the rubber hardly not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.

③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.





(PVM-136/146E only)



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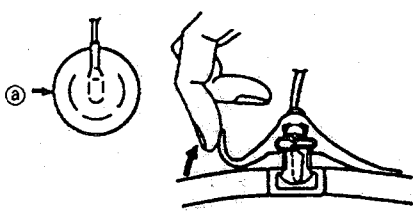

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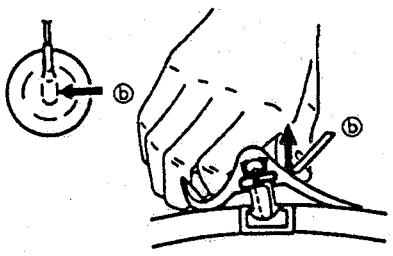

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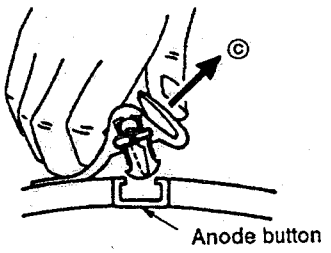

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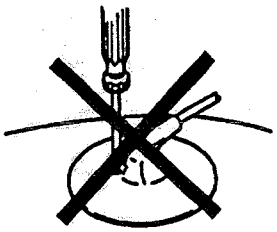
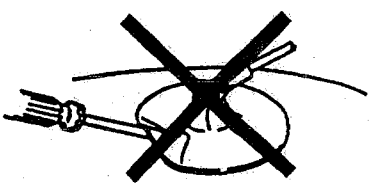
The shatter-hook terminal will stick out or hurt the rubber.





SECTION 3
SAFETY RELATED ADJUSTMENTS
(US Model only)

3-1. SAFETY RELATED ADJUSTMENT

B+ MAX CONFIRMATION (⊠ : RV651)

The following adjustments should always be performed when replacing the folowing components (maked ◪ on the schematic diagram).

◪ on the G board : R656, R657, R658, RV651

1. Supply 120.0±2.0V AC to with variable auto-transformer.
2. Receive an entire white signal.
3. CONTRAST ····· normal
   BRIGHTNESS ····· normal
4. Connect a digital multimeter to the TP 2 (CN501 pin −①) on the A board.
5. Adjust RV651 on the G board for 24.0±0.2VDC.
6. After adjusting, fasten RV651 in place with epoxy.

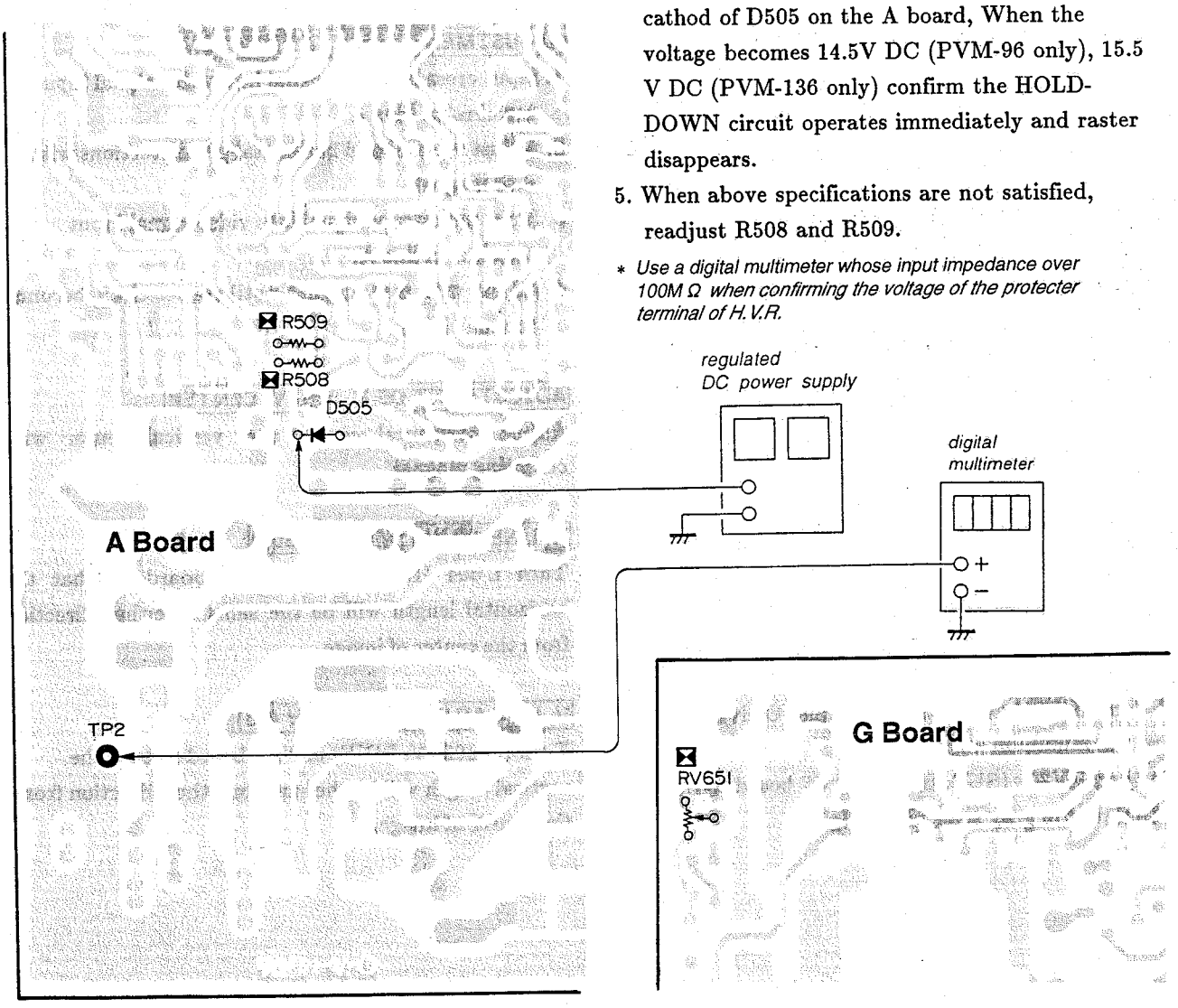
HOLD-DOWN CIRCUIT CONFIRMATION READJUSTMENTS (⊠ : R508, R509)

The following adjustments should always be performed when replacing the folowing components (maked ◪ on the schematic diagram).

◪ on the A board :
C518, C519, C520, C523, C524, D502, L502, R508, R509, T502 (FBT)

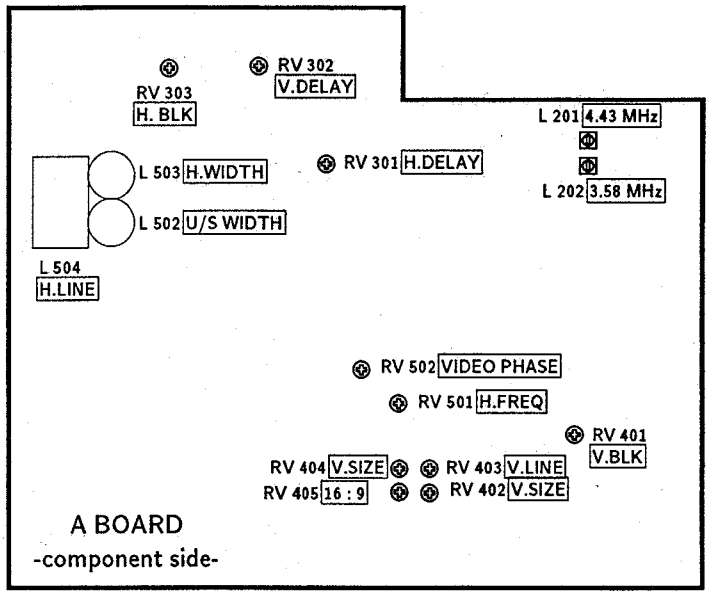
1. Supply 120.0±2.0V AC to with variable auto-transformer.
2. Receive an entire white signal.
3. CONTRAST ····· Minimum
   BRIGHTNESS ····· Minimum
4. Apply an external DC voltage gradually to cathod of D505 on the A board, When the voltage becomes 14.5V DC (PVM-96 only), 15.5 V DC (PVM-136 only) confirm the HOLD-DOWN circuit operates immediately and raster disappears.
5. When above specifications are not satisfied, readjust R508 and R509.

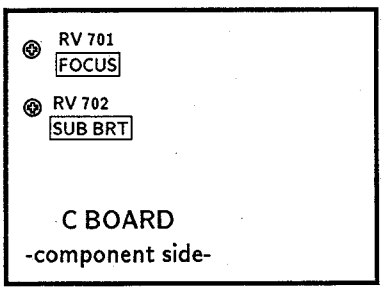
* *Use a digital multimeter whose input impedance over 100M Ω when confirming the voltage of the protecter terminal of H.V.R.*



SECTION 4
CIRCUIT ADJUSTMENTS

4-1. A AND C BOARDS ADJUSTMENT





ROUGH ADJUSTMENTS OF H. AND V. SIZE (L 503, R 402)

1. Input monoscope signal into video signal input terminal of line A.
2. Loosen deflection yoke fixing screw to adjust tilted image and fasten screw after adjustment.
3. Make rough adjustments to obtain 15.5 frames in H. size and 12 frames in V. size by turning L503 (H. WIDTH) and RV402 (V.SIZE) respectively.

HORIZONTAL OSCILLATING ADJUSTMENT (RV 501)

1. Connect electrolytic capacitor of 10μF/25V between pin① of connector CN201 and grounding on "A" board.
2. Adjust RV501 (H. FREQ) to hold flowing image.

SUB BRIGHTNESS ADJUSTMENT (RV702)

1. Input gray scale signal into video signal input terminal of line A.
2. Set BRIGHT knob at the center and CONTR knob at the minimum position.
3. Adjust RV702 (SUB. BRT) on "C" board so that 20 IRE part of gray scale glows slightly.

ADJUSTMENT IMAGE DISTORTION

1. Input cross hatching signal into video signal input terminal of Line A.
2. Adjust vertical and horizontal pin distortions with disk magnet.
3. Input monoscope signal into video signal input terminal of line A.
4. Adjust with disk magnet until corner circle becomes to true circle.

ADJUSTMENT OF H. AND V. CENTER

Adjust horizontal center and vertical center with centering magnet.

H. LINE ADJUSTMENT (L 504)

Turn L 504 (H. LINE) on "A" board so that the horizontal length will be the same in either direction from the center of image.

V. LINE ADJUSTMENT (RV 403)

Turn RV403 (V. LINE) on "A" board so that the vertical length will be the same in either direction from the center of image.

H. AND V. SIZE FINE ADJUSTMENT (L 503, RV 402)

1. Input monoscope signal into video signal input terminal of line A.
2. Set BRIGHT knob at 50% position and CONTR knob at 80% position.
3. Turn L503 (H. WIDTH) and RV402 (V. SIZE) to obtain the following number of frames.

(PVM-96/96 E only)
H. SIZE : 15.3 frames V. SIZE : 12.0 frames
(PVM-136/146 E only)
H. SIZE : 15.0 frames V. SIZE : 12.0 frames

FOCUS ADJUSTMENT (RV701)

1. Input monoscope signal into video signal input terminal of line A.
2. Set BRIGHT knob at 50% position and CONTR knob at 80% position.
3. Turn RV701 on "C" board to adjust mid point between the center and the corner becomes just in focus while watching focus balance of them.

ADJUSTMENT IN UNDER SCANNING MODE

H. AND V. SIZE FINE ADJUSTMENT (L502, RV404)

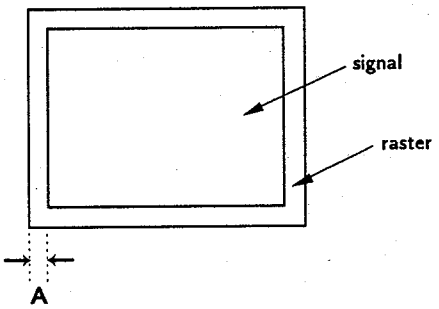
1. Input monoscope signal into video signal input terminal of line A.
2. Set BRIGHT knob at 50% position and CONTR knob at 80% position.
3. Change mode to under scan by pressing under scan switch located in front of the set.
4. Turn both L502 (U/S WIDTH) and RV404 (V. SIZE) to adjust under scan so as to enable corner of monoscope signal touches with the corner of effective image area of CRT.

VIDEO PHASE ADJUSTMENT (RV502)

1. Set BRIGHT knob at maximum and CONTR knob at minimum position.
2. Turn RV502 (VIDEO PHASE) so that the luster comes at the center.

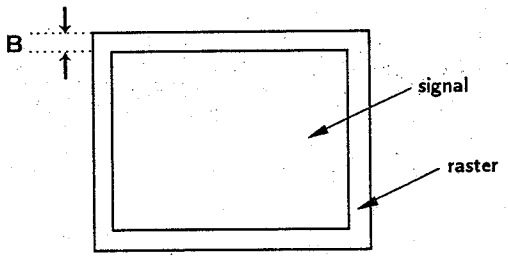
H. BLK ADJUSTMENT (RV 303)

1. Set BRIGHT knob at maximum and CONTR knob at minimum position.
2. Turn RV 303 (H. BLK) so that the distance between the luster at left side of CRT and signal part (A) will become approximately 1.0 mm.



V. BLK ADJUSTMENT (RV401)

1. Set BRIGHT knob at maximum and CONTR knob at minimum position.
2. Turn RV401 (V. BLK) so that the distance between the luster at top of CRT image and signal part (B) will become approximately 1.0 mm.

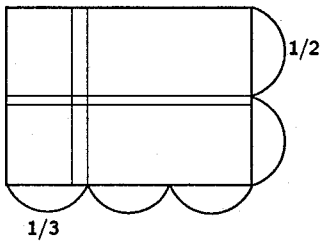


16 : 9 ADJUSTMENT (RV 405)

1. Input monoscope signal into video signal input terminal of line A.
2. Turn on 16 : 9 switch located on the front panel.
3. Turn RV 405 (16 : 9) to adjust H. to 16 and V. to 9.

H/V DELAY ADJUSTMENT (RV 301, RV 302)

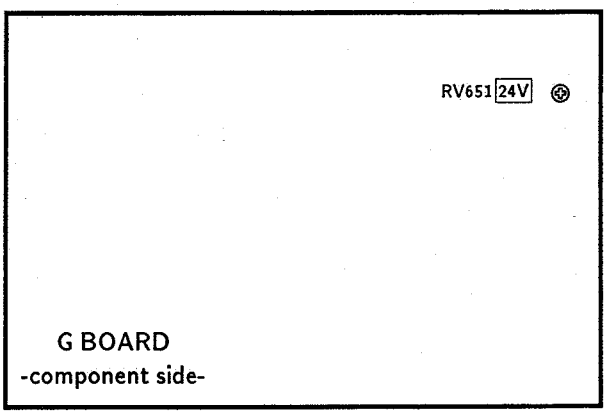
1. Input monoscope signal into video signal input terminal of line A.
2. Turn on H/V delay switch located on the front panel.
3. Turn RV301 (H. DELAY) to adjust so that H. BLK signal part comes at the position of one third of left side of the image.
4. Turn RV302 (V. DELAY) to adjust so that V. BLK signal part comes at the position of one half of vertical direction of the image.



NOTCH ADJUSTMENT (L 201, L 202)

1. Input color bar signal of NTSC into video signal input terminal of Line A.
2. Connect oscilloscope between pin③ of connector CN 202 and grounding.
3. Adjust L202 (3.58MHz) to minimize color component CN202 and grounding.
4. Input color bar signal of PAL system.
5. Connect oscilloscope between pin③ of connector CN 202 and grounding.
6. Adjust L201 (4.43MHz) to minimize color component of 4.43MHz.

4-2. G BOARD ADJUSTMENT

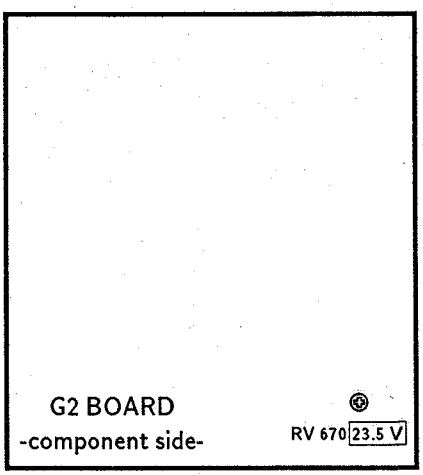


B+ LINE VOLTAGE ADJUSTMENT (RV 651)

Input voltage 120V AC : PVM-96/136 only
230V AC : PVM-96 E/146E only

1. Input monoscope signal into video signal input terminal of line A.
2. Connect digital multimeter to pin① of CN501.
3. Turn RV651 to adjust it to 24.0 ± 0.2VDC.

4-3. G 2 BOARD ADJUSTMENT

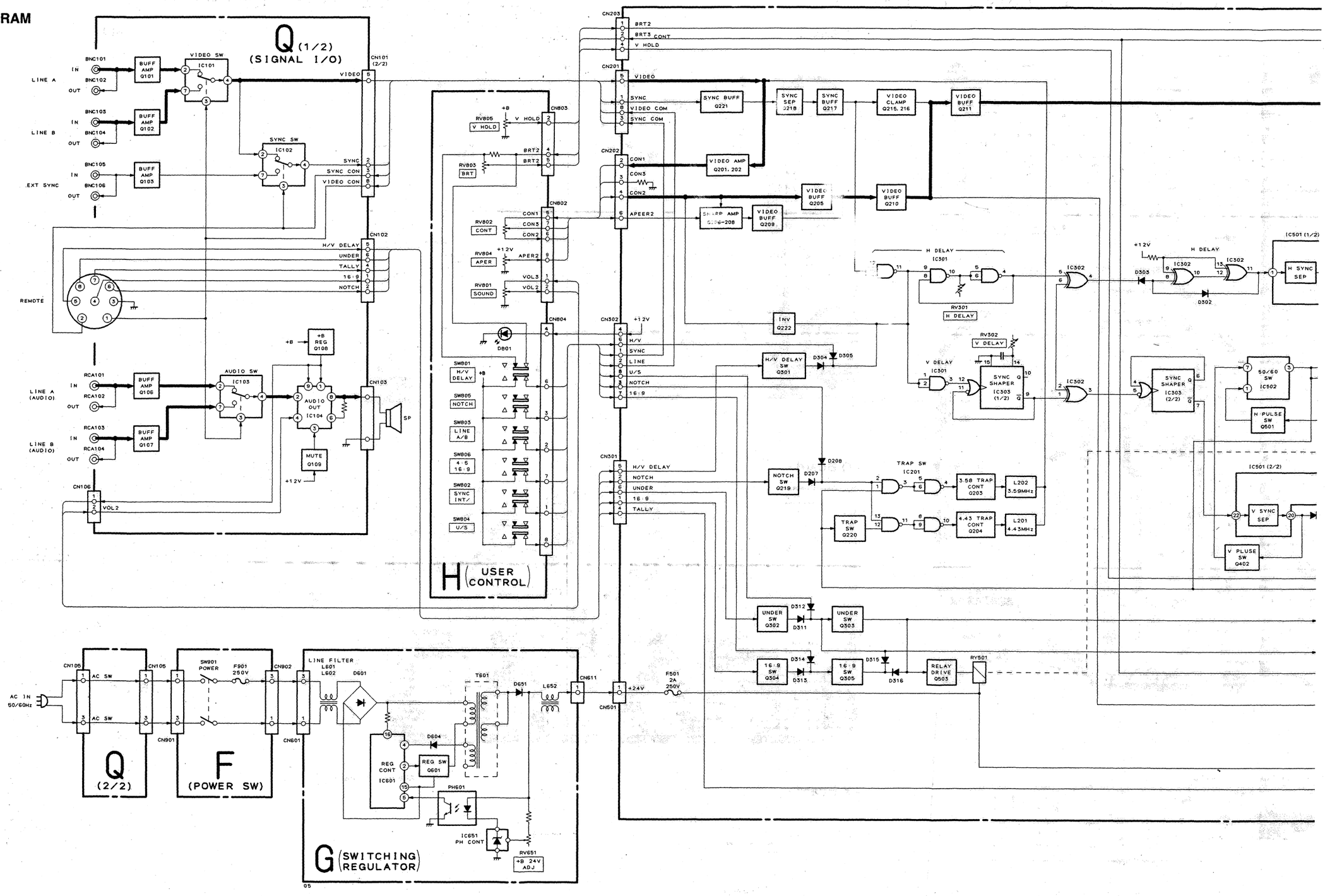


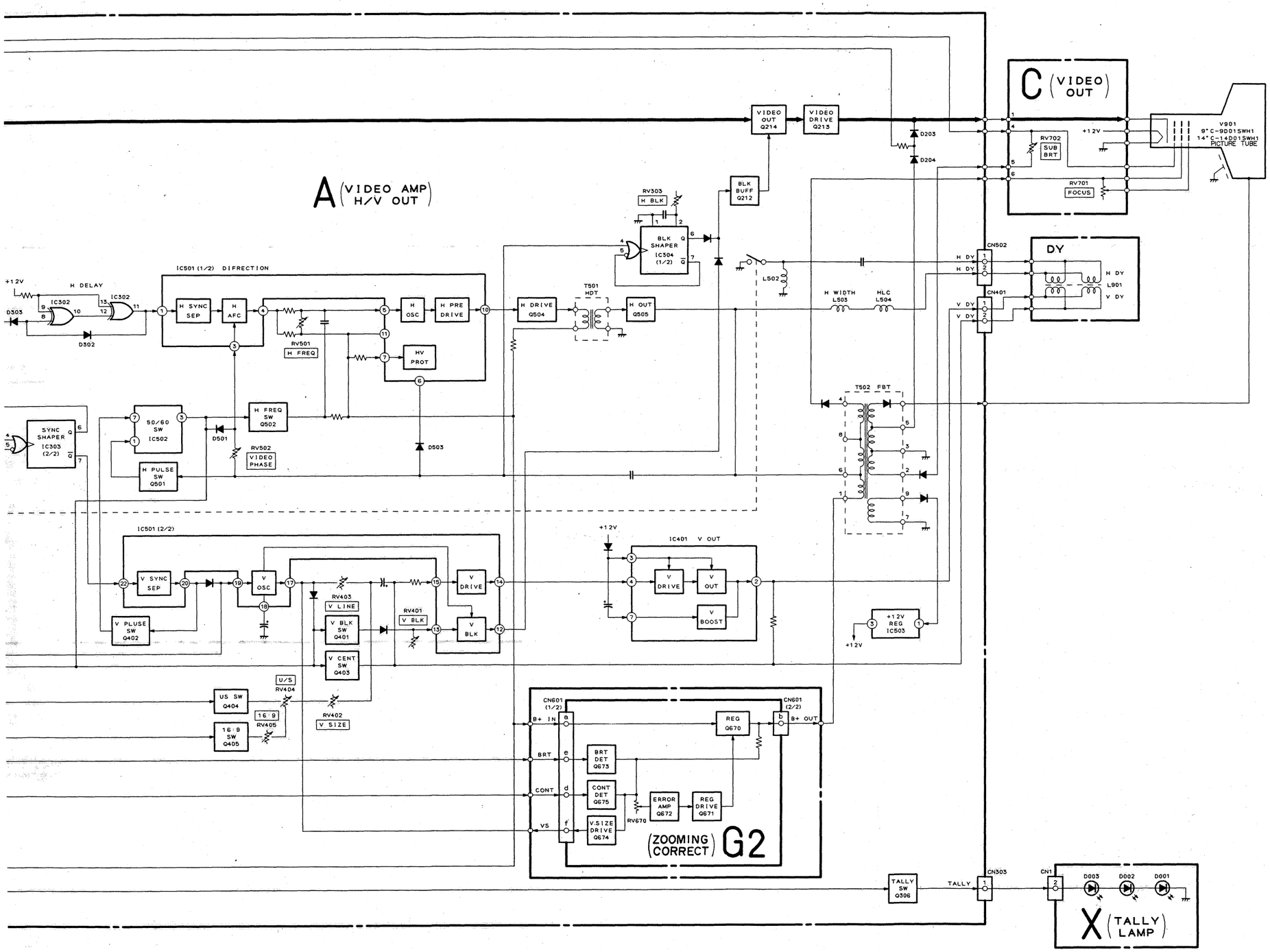
+23.5 V ADJUSTMENT (RV 670)

1. Input monoscope signal into video signal input terminal of line A.
2. Connect digital multimeter to emitter of Q 670.
3. Confirm the voltage is 24.0 ± 0.2VDC.
4. BRIGHT ····· Minimum
   CONTR ····· Minimum
5. Connect a digital multimeter to the collector of Q670.
6. Turn RV 670 to adjust it to 23.5 ± 0.1 VDC.

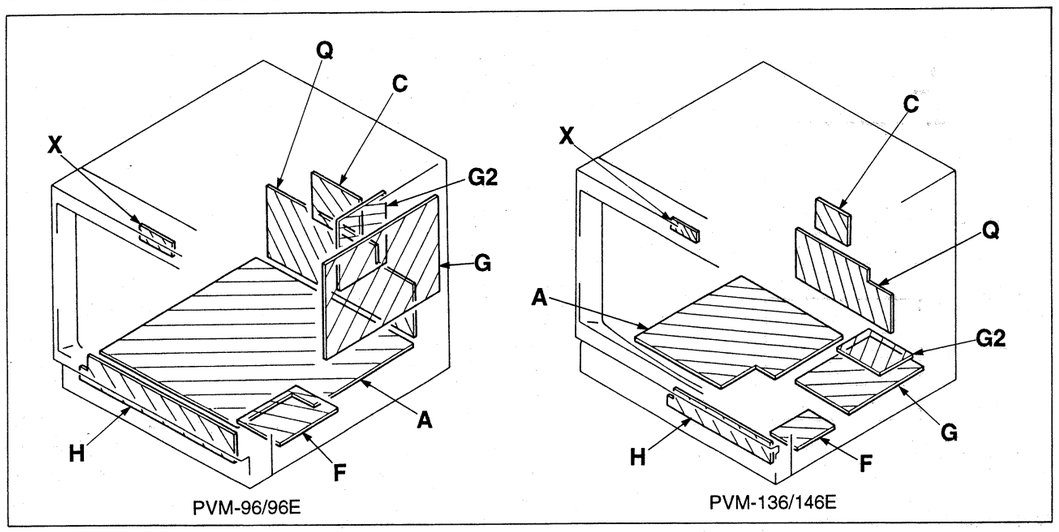
SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAM




A (VIDEO AMP H/V OUT)
C (VIDEO OUT)
DY
G2 (ZOOMING CORRECT)
X (TALLY LAMP)
VIDEO OUT Q214
VIDEO DRIVE Q215
BLK BUFF Q212
D203
D204
RV702 SUB BRT
RV701 FOCUS
+12V
V901
9"C-9D01SWH1
14"C-14D01SWH1
PICTURE TUBE
RV303 H BLK
BLK SHAPER IC304 (1/2)
L502
CN502
CN401
H DY
V DY
L901
H WIDTH L503
HLC L504
T501 HDT
H DRIVE Q504
H OUT Q505
T502 FBT
H DELAY
IC302
D303
D302
H SYNC SEP
H AFC
H OSC
H PRE DRIVE
HV PROT
RV501 H FREQ
IC501 (1/2) DIFRECTION
SYNC SHAPER IC303 (2/2)
50/60 SW IC502
H FREQ SW Q502
H PULSE SW Q501
D501
D503
RV502 VIDEO PHASE
IC501 (2/2)
V SYNC SEP
V OSC
V PLUSE SW Q402
RV403 V LINE
V BLK SW Q401
V CENT SW Q403
RV401 V BLK
V DRIVE
V BLK
IC401 V OUT
V DRIVE
V OUT
V BOOST
+12V REG IC503
U/S SW Q404
16:9 SW Q405
U/S RV404
16:9 RV405
RV402 V SIZE
CN601 (1/2)
CN601 (2/2)
B+ IN
B+ OUT
BRT
CONT
VS
REG Q670
BRT DET Q673
CONT DET Q675
V.SIZE DRIVE Q674
ERROR AMP Q672
REG DRIVE Q671
RV670
TALLY SW Q306
TALLY
CN303
CN1
D003
D002
D001

5-2. CIRCUIT BOARDS LOCATION



5-3. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

  Pitch: 5 mm
  Rating electrical power 1/4W

- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- △: internal component.
- : panel designation.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by ⊠ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by ◪, make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ⊠ and repeat the adjustment until the specified value is achieved. (Refer to RV651,and R406,R408 adjust on page11.)
- When replacing the part in below table be sure to parform the related adjustment.

Part replaced(◪)	Adjustment(⊠)
G BOARD RV651,R656,R657,R658	RV651 (B+ MAX)
A BOARD C518,C519,C520,C523,C524,D502,L502, R508,R509,T502(FBT)	R508,R509 (HOLD-DOWN)

- All voltages are in V.
- Voltage are dc with respect to ground unless otherwise noted.
- Readings are taken with a color-bar signal input.
- : adjustment for repair.
- Voltage variations may be noted due to normal production tolerance.
- ▬▬ : B+ bus.
- ■ ■ ■ : B- bus.
- ➡ : signal path.
- Color-bar signal received or common voltage.

Reference information

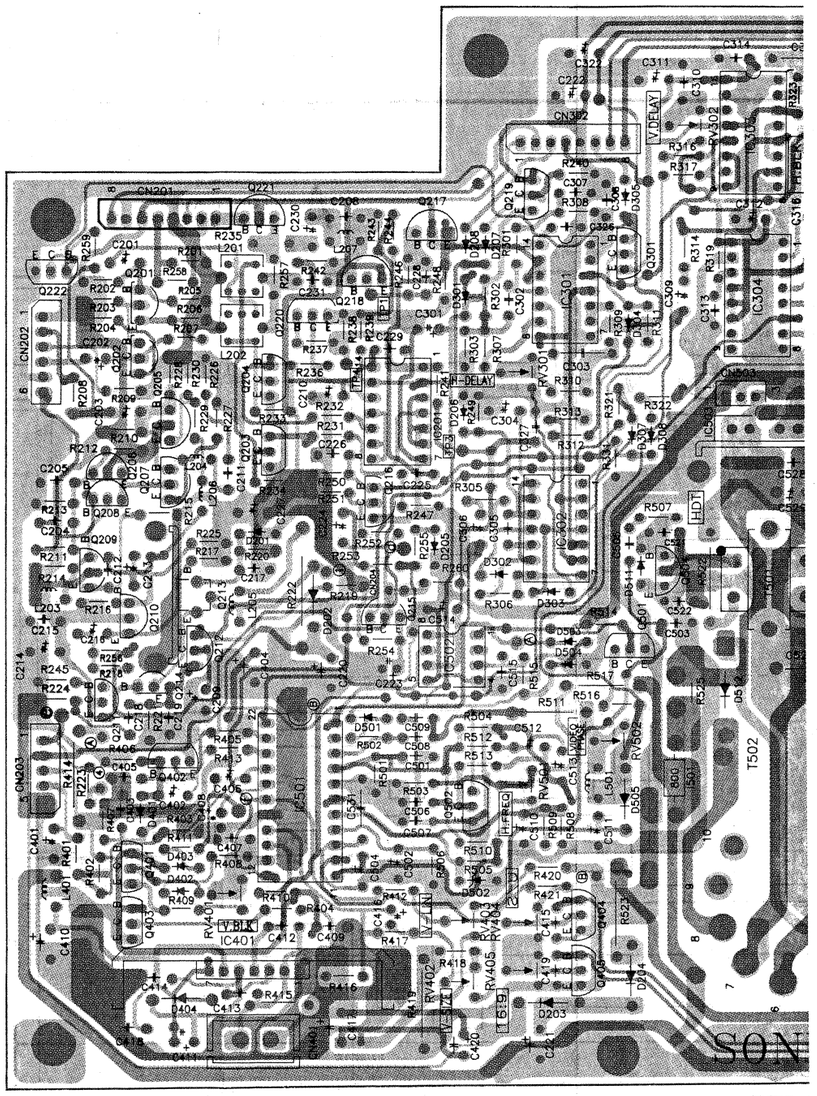
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE WIREWOUND
	: RB	NONFLAMMABLE CEMENT
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note:
The components identified by shading and mark⚠ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

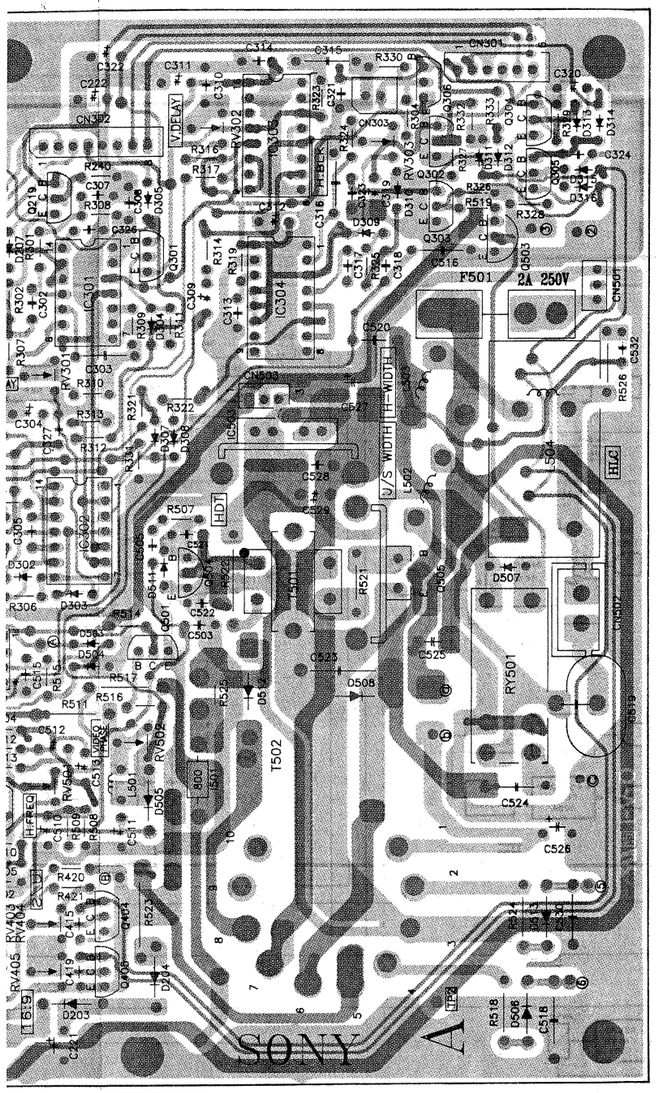
A [VIDEO AMP H/V OUT] H [USER CONTROL] G [SWITCH REGUL

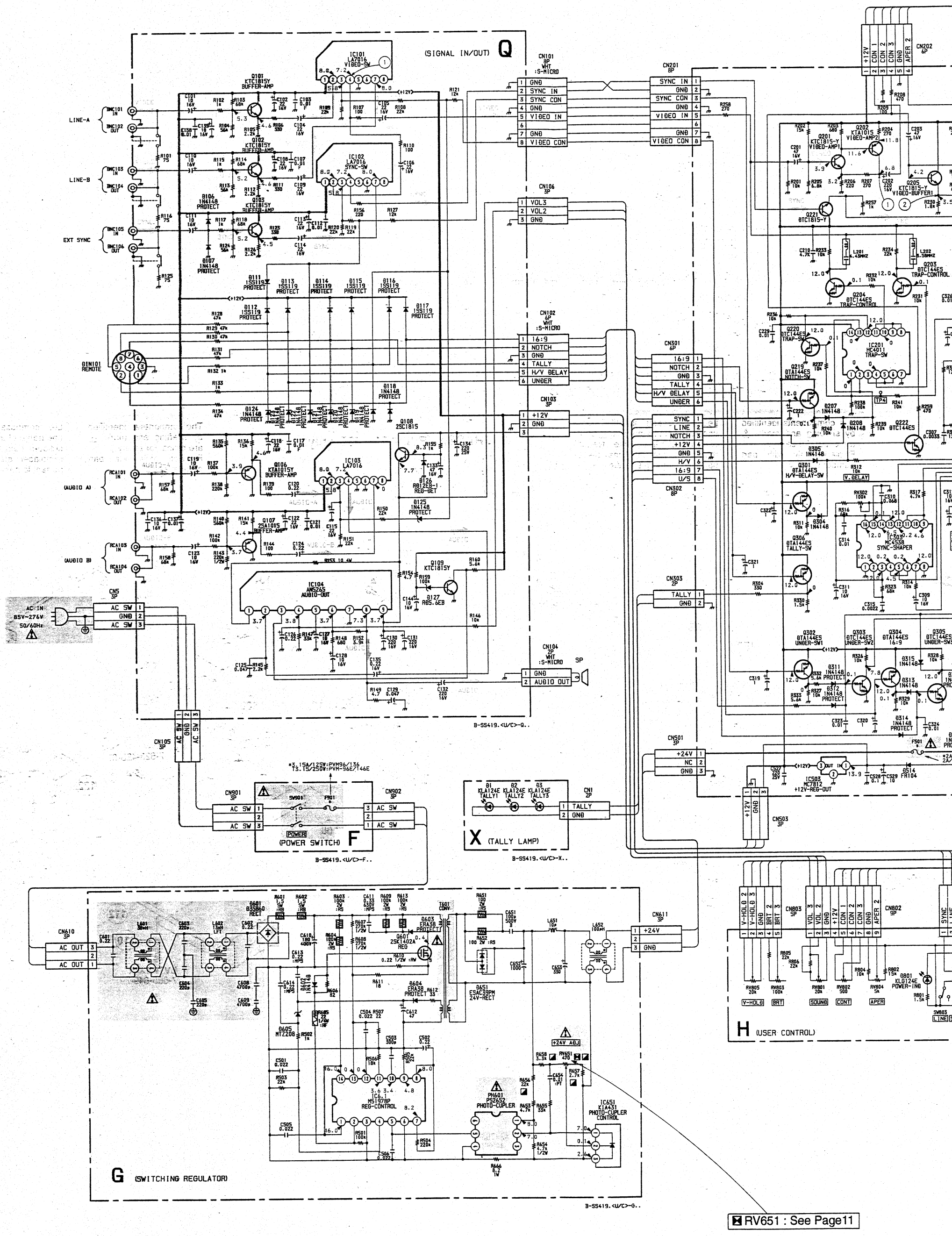
- A Board -

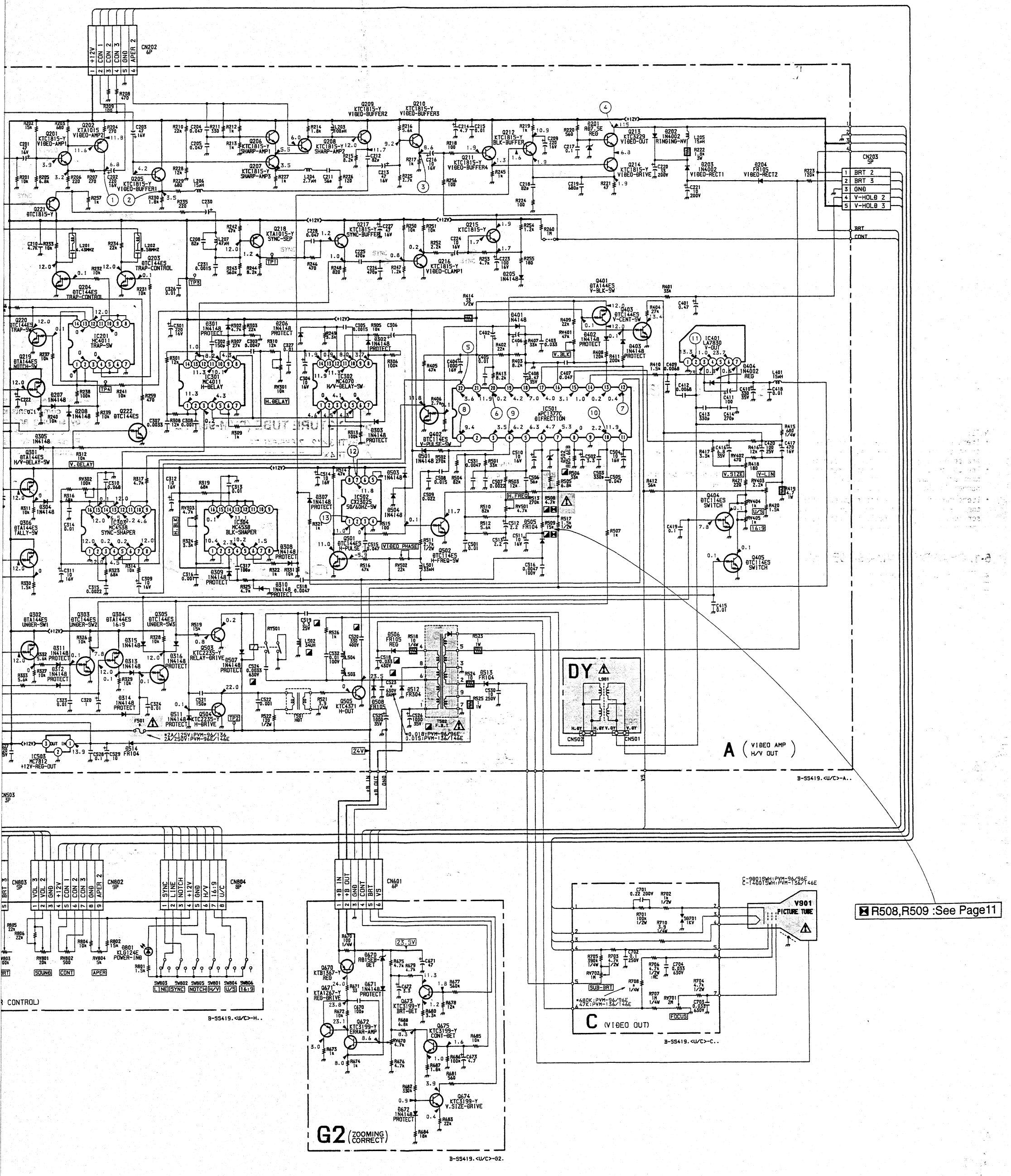


G [SWITCHING REGULATOR] **Q** [SIGNAL IN/OUT] **X** [TALLY LANP] **G2** [ZOOMING CORRECT] **F** [POWER SWITCH] **C** [VIDEO OUT]

- G Board -




(SIGNAL IN/OUT) Q
LINE-A
LINE-B
EXT SYNC
(AUDIO A)
(AUDIO B)
IC101 LA7016 VIDEO-SW
IC102 LA7016 SYNC-SW
IC103 LA7016
IC104 AN5265 AUDIO-OUT
Q101 KTC1815Y BUFFER-AMP
Q102 KTC1815Y BUFFER-AMP
Q103 KTC1815Y BUFFER-AMP
Q106 KTA1015Y BUFFER-AMP
Q107 2SA1015 BUFFER-AMP
Q108 2SC1815
Q109 KTC1815Y
B106 1N4148 PROTECT
B107 1N4148 PROTECT
B111 1SS119 PROTECT
B112 1SS119 PROTECT
B113 1SS119 PROTECT
B114 1SS119 PROTECT
B115 1SS119 PROTECT
B116 1SS119 PROTECT
B117 1SS119 PROTECT
B118 1N4148 PROTECT
B124 1N4148 PROTECT
B125 1N4148 PROTECT
B126 RD12EB-1 REG-DET
B127 RD5.6EB
CN101 8P WHT :S-MICRO
CN102 6P WHT :S-MICRO
CN103 3P
CN104 2P WHT :S-MICRO
CN106 3P
CN201 8P
CN202 6P
CN301 6P
CN302 8P
CN303 2P
CN501 3P
CN503 3P
CN5 3P
CN105 3P
CN901 3P
CN902 3P
CN1 2P
CN610 5P
CN611 3P
CN803 5P
CN802 9P
BIN101 REMOTE
AC IN 85V~276V 50/60Hz
SW901
F901
POWER
(POWER SWITCH) F
B1 KLA124E TALLY1
B2 KLA124E TALLY2
B3 KLA124E TALLY3
X (TALLY LAMP)
Q201 KTC1815-Y VIDEO-AMP1
Q202 KTA1015 VIDEO-AMP2
Q205 KTC1815-Y VIDEO-BUFFER
Q220 BTC144ES TRAP-SW
Q221 BTC1815-Y
Q222 BTC144ES
Q203 BTC144ES TRAP-CONTROL
Q204 BTC144ES TRAP-CONTROL
Q219 BTA144ES NOTCH-SW
Q301 BTA144ES H/V-DELAY-SW
Q302 BTA144ES UNDER-SW1
Q303 BTC144ES UNDER-SW2
Q304 BTA144ES 16:9
Q305 BTC144ES UNDER-SW3
Q306 BTA144ES TALLY-SW
IC201 MC4011 TRAP-SW
IC303 MC4538 SYNC-SHAPER
IC503 MC7812 +12V-REG-OUT
L201 4.43MHZ
L202 5.58MHZ
B207 1N4148
B208 1N4148
B305 1N4148
B311 1N4148 PROTECT
B312 1N4148 PROTECT
B313 1N4148
B314 1N4148 PROTECT
B315 1N4148
F501 FR104
G (SWITCHING REGULATOR)
H (USER CONTROL)
IC601 B35B40 RECT
Q601 2SK1402A REG
B603 ERA38 PROTECT
B604 ERA38 PROTECT
B605 MTZ20B
B651 ESAC39PM 24V-RECT
IC651 K1A431 PHOTO-CUPLER CONTROL
PH601 PS2652 PHOTO-CUPLER
IC6-1 M51978P REG-CONTROL
+24V ADJ
RV651 470
RV805 20k V-HOLD
RV803 100k BRT
RV801 20k SOUND
RV802 500 CONT
RV804 5k APER
SW803 LINE
B801 KLG124E POWER-INB
RV651 : See Page11
B-SS419.<U/C>-Q..
B-SS419.<U/C>-F..
B-SS419.<U/C>-X..
B-SS419.<U/C>-G..


CN202 6P
+12V
CON 1
CON 2
CON 3
GND
APER 2
Q201 KTC1815-Y VIDEO-AMP1
Q202 KTA1015 VIDEO-AMP2
Q205 KTC1815-Y VIDEO-BUFFER1
Q206 KTC1815-Y SHARP-AMP1
Q207 KTC1815-Y SHARP-AMP3
Q208 KTC1815-Y SHARP-AMP2
Q209 KTC1815-Y VIDEO-BUFFER2
Q210 KTC1815-Y VIDEO-BUFFER3
Q211 KTC1815-Y VIDEO-BUFFER4
Q212 KTC1815-Y BLK-BUFFER
Q213 KTC3229 VIDEO-OUT
Q214 KTC1815-Y VIDEO-DRIVE
Q201 RB7.5E REG
D202 1N4002 RINGING-NV
D203 1N4002 VIDEO-RECT1
D204 FR105 VIDEO-RECT2
CN203 5P
BRT 2
BRT 3
GND
V-HOLD 2
V-HOLD 3
BRT CONT
Q221 BTC1815-Y
Q218 KTA1015-Y SYNC-SEP
Q217 KTC1815-Y SYNC-BUFFER
Q215 KTC1815-Y
Q216 KTC1815-Y VIDEO-CLAMP1
D205 1N4148
L201 6.45MHZ
L202 5.58MHZ
Q203 BTC144ES TRAP-CONTROL
Q204 BTC144ES TRAP-CONTROL
Q220 BTC144ES TRAP-SW
IC201 HC4011 TRAP-SW
Q219 BTA144ES NOTCH-SW
Q207 1N4148
Q208 1N4148
Q222 BTC144ES
TP3
TP4
TP1
Q401 BTA144ES V-BLK-SW
Q403 BTC144ES V-CENT-SW
D401 1N4148
D402 1N4148 PROTECT
D403 1N4148 PROTECT
V.BLK
IC401 LA7830 V-OUT
D404 1N4002 REG
L401 15mH
IC501 μPC1377C DIFRECTION
Q402 BTC144ES V-PULSE-SW
D501 1N4148
V.DELAY
Q301 BTA144ES H/V-DELAY-SW
D301 1N4148 PROTECT
D302 1N4148 PROTECT
D303 1N4148 PROTECT
D304 1N4148
D305 1N4148
D306 1N4148 PROTECT
D307 1N4148 PROTECT
D308 1N4148 PROTECT
D309 1N4148 PROTECT
D310 1N4148 PROTECT
IC301 MC4011 H-DELAY
IC302 MC4070 H/V-DELAY-SW
H.DELAY
IC303 MC4538 SYNC-SHAPER
IC304 MC4538 BLK-SHAPER
H.BLK
IC502 CX23025 50/60HZ-SW
Q501 BTC144ES H-PULSE
Q502 BTC114ES H-FREQ-SW
H.FREQ
VIDEO PHASE
Q404 BTC114ES SWITCH
Q405 BTC114ES SWITCH
V.SIZE
V-LIN
U/S
16:9
Q302 BTA144ES UNDER-SW1
Q303 BTC144ES UNDER-SW2
Q304 BTA144ES 16:9
Q305 BTC144ES UNDER-SW3
D311 1N4148 PROTECT
D312 1N4148 PROTECT
D313 1N4148
D314 1N4148 PROTECT
D315 1N4148
D316 1N4148 PROTECT
Q503 KTC2235-Y RELAY-DRIVE
D507 1N4148 PROTECT
RY501
L502 34UH
Q504 KTC2235-Y H-DRIVE
D511 1N4148 PROTECT
TP2
F501
*2A/125V:PVM-96/136
2A/250V:PVM-96E/146E
Q505 KTC4371 H-OUT
T501 HBT
D506 FR105 REG
D512 FR304
D508 FR105
T502 F.B.T.
*0.018:PVM-96/96E
0.015:PVM-136/146E
24V
IC503 MC7812 +12V-REG-OUT
DY
L901
CN502
CN501
H.GY
H.GY
V.GY
V.GY
A (VIDEO AMP H/V OUT)
B-SS419.<U/C>-A..
CN503 3P
CN803 5P
VOL 3
VOL 2
GND
+12V
CON 1
CON 2
CON 3
GND
APER 2
CN802 9P
SYNC
LINE
NOTCH
+12V
GND
H/V
16:9
U/C
CN804 8P
BRT
SOUND
CONT
APER
D801 KLG124E POWER-IND
SW803 LINE
SW802 SYNC
SW805 NOTCH
SW801 H/V
SW804 U/S
SW806 16:9
CONTROL)
B-SS419.<U/C>-H..
CN601 6P
+B IN
+B OUT
GND
CONT
BRT
VS
23.5V
Q670 KTB1367-Y REG
D670 RB15EB-BET
Q671 KTA1267-Y REG-DRIVE
D671 1N4148 PROTECT
Q672 KTC3199-Y ERRAR-AMP
Q673 KTC3199-Y BRT-DET
Q675 KTC3199-Y CONT-DET
Q674 KTC3199-Y V.SIZE-DRIVE
D672 1N4148 PROTECT
G2 (ZOOMING CORRECT)
B-SS419.<U/C>-G2.
C-9801SWH:PVM-96/96E
C-14D01SWH:PVM-136/146E
V901 PICTURE TUBE
SUB-BRT
FOCUS
*680K:PVM-96/96E
47K:PVM-136/146E
C (VIDEO OUT)
B-SS419.<U/C>-C..
R508,R509 :See Page11
1 : See Page11

(SIGNAL IN/OUT) Q

CN101 8P WHT :S-MICRO
1 GND
2 SYNC IN
3 SYNC CON
4 GND
5 VIDEO IN
6
7 GND
8 VIDEO CON

CN201 8P
SYNC IN 1
GND 2
SYNC CON 3
GND 4
VIDEO IN 5
GND 7
VIDEO CON 8

CN202 6P
+12V 1
CON 1 2
CON 3 3
CON 2 4
GND 5
APER 2 6

CN106 3P
1 VOL3
2 VOL2
3 GND

CN102 6P WHT :S-MICRO
1 16:9
2 NOTCH
3 GND
4 TALLY
5 H/V DELAY
6 UNDER

CN103 3P
1 +12V
2 GND
3

CN301 6P
16:9 1
NOTCH 2
GND 3
TALLY 4
H/V DELAY 5
UNDER 6

CN302 8P
SYNC 1
LINE 2
NOTCH 3
+12V 4
GND 5
H/V 6
16:9 7
U/S 8

CN303 2P
TALLY 1
GND 2

CN104 2P WHT :S-MICRO
1 GND
2 AUDIO OUT
SP

CN501 3P
+24V 1
NC 2
GND 3

CN503 3P
+12V 1
GND 2
3

CN1 2P
1 TALLY
2 GND
D1 KLA124E TALLY1
D2 KLA124E TALLY2
D3 KLA124E TALLY3
X (TALLY LAMP)

CN611 3P
1 +24V
2
3 GND

CN803 5P
1 V-HOLD 2
2 V-HOLD 3
3 GND
4 BRT 2
5 BRT 3
V-HOLD BRT SOUND CONT APER

CN802 9P
1 VOL 3
2 VOL 2
3 GND
4 +12V
5 CON 1
6 CON 2
7 CON 3
8 GND
9 APER 2

CN804 8P
1 SYNC
2 LINE
3 NOTCH
4 +12V
5 GND
6 H/V
7 16:9
8 U/C
H (USER CONTROL)
SW803 LINE
SW802 SYNC
SW805 NOTCH
SW801 H/V
SW804 U/S
SW806 16:9

CN601 6P
1 +B IN
2 +B OUT
3 GND
4 CONT
5 BRT
6 VS
G2 (ZOOMING CORRECT)

Q201 KTC1815-Y VIDEO-AMP1
Q202 KTA1015 VIDEO-AMP2
Q203 BTC144ES TRAP-CONTROL
Q204 BTC144ES TRAP-CONTROL
Q205 KTC1815-Y VIDEO-BUFFER1
Q206 KTC1815-Y SHARP-AMP1
Q207 KTC1815-Y SHARP-AMP3
Q208 KTC1815-Y SHARP-AMP2
Q209 KTC1815-Y VIDEO-BUFFER2
Q210 KTC1815-Y VIDEO-BUFFER3
Q211 KTC1815-Y VIDEO-BUFFER4
Q212 KTC1815-Y BLK-BUFFER
Q201 RGT_SE REG
Q221 BTC1815-Y
Q217 KTC1815-Y SYNC-BUFFER
Q218 KTA1015-Y SYNC-SEP
Q215 KTC1815-Y
Q216 KTC1815-Y VIDEO-CLAMP1
Q220 BTC144ES TRAP-SW
Q219 BTA144ES NOTCH-SW
Q207 1N4148
Q208 1N4148
Q222 BTC144ES
Q305 1N4148
Q301 BTA144ES H/V-DELAY-SW
Q306 BTA144ES TALLY-SW
Q309 KTC1815Y
Q302 BTA144ES UNDER-SW1
Q303 BTC144ES UNDER-SW2
Q304 BTA144ES 16:9
Q305 BTC144ES UNDER-SW3
Q311 1N4148 PROTECT
Q312 1N4148 PROTECT
Q313 1N4148 PROTECT
Q316 1N4148 PROTECT
Q314 1N4148 PROTECT
Q503 KTC2235-Y RELAY-DRIVE
Q507 1N4148 PROTECT
Q511 1N4148 PROTECT
Q504 KTC2235-Y H-DRIVE
Q505 KTC4371 H-OUT
Q506 FR105 REG
Q508 FR105
Q512 FR304
Q513 FR104
Q514 FR104
Q401 BTA144ES V-BLK-SW
Q403 BTC144ES V-CENT-SW
Q402 BTC114ES V-PULSE-SW
Q501 1N4148
Q502 RGS-2EB
Q307 1N4148
Q308 1N4148 PROTECT
Q309 1N4148 PROTECT
Q310 1N4148 PROTECT
Q307 1N4148 PROTECT
Q504 1N4148
Q505 1N4148
Q501 BTC144ES H-PULSE
Q502 BTC144ES H-FREQ-SW
Q670 KTB1367-Y REG
Q671 KTA1267-Y REG-DRIVE
Q671 1N4148 PROTECT
Q670 RB15EB-DET
Q672 KTC3199-Y ERROR-AMP
Q673 KTC3199-Y BRT-DET
Q675 KTC3199-Y CONT-DET
Q674 KTC3199-Y V.SIZE-DRIVE
Q672 1N4148 PROTECT

IC201 MC4011 H-DELAY
IC301 MC4011 H-DELAY
IC302 MC4070 H/V-DELAY-SW
IC303 MC4538 SYNC-SHAPER
IC304 MC4538 BLK-SHAPER
IC502 CX23025 50/60HZ-SW
IC501 μPC1377C DIRECTION
IC503 MC7812 +12V-REG-OUT
IC651 KIA431 PHOTO-CUPLER CONTROL
PH601 PS2561 PHOTO-CUPLER

L201 4.43MHZ
L202 5.58MHZ
L203 100uH
L204 2.7uH
L205 15uH
L206 15uH
L207 47uH
L501 33mH
L502 34uH
L503
L504
L901

RY501
RY401 47K
RY301 10K
RY302 100K
RY303 4.7K
RY501 4.7K
RY502 22K
RV651 470
RV805 20K
RV803 100K
RV801 20K
RV802 500
RV804 5K

TP1
TP2
TP3
TP4

F501 *2A/125V:PVM-96/136 2A/250V:PVM-96E/146E
TS02 F.B.T
*0.018:PVM-96/96E 0.015:PVM-136/146E
*680K:PVM-96/96E 4.7K:PVM-136/146E

D205 1N4148
D401 1N4148
D402 1N4148 PROTECT
D501 1N4148
D502 270K
D503 1N4148
D504 1N4148
D505 FR104
D506 FR105 REG
D507 1K
D508 FR105
D512 FR304
D513 FR104
D801 KLG124E POWER-IND

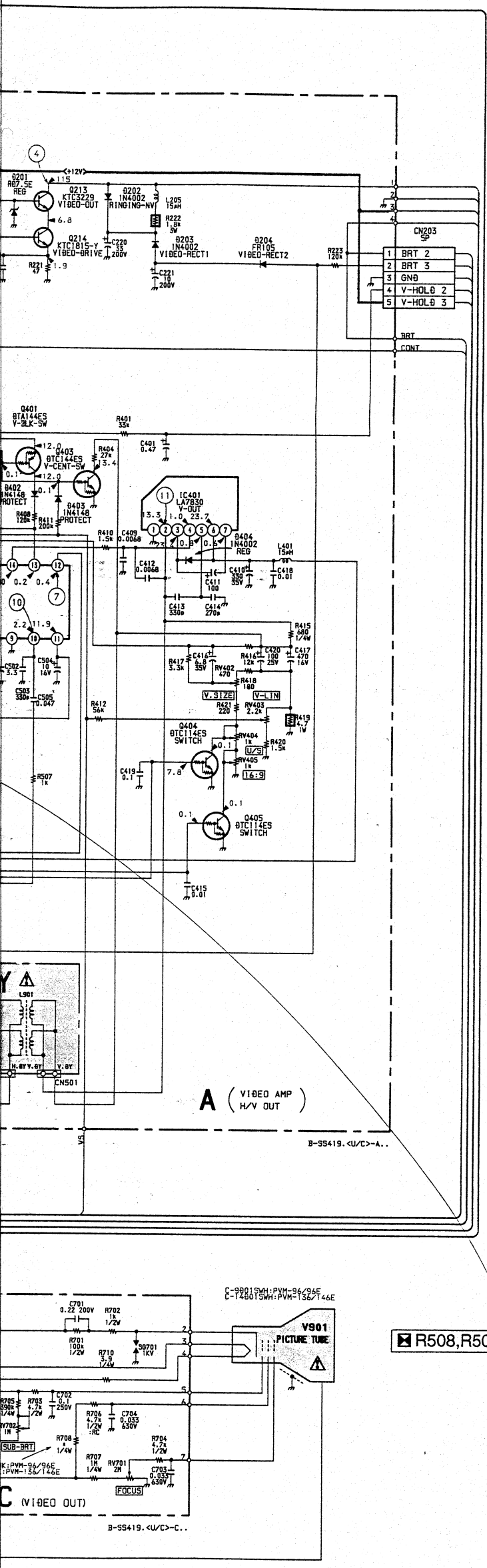
T601 CONV
T651 SMC-39PM 24V-RECT

DY
CN502
CN501
C (VIDEO OUT)

+12V
+24V
24V
23.5V
+B IN
+B OUT
V.DELAY
H.DELAY
V.BLK
H.BLK
H.FREQ
SUB-BRT
VIDEO PHASE
+24V ADJ

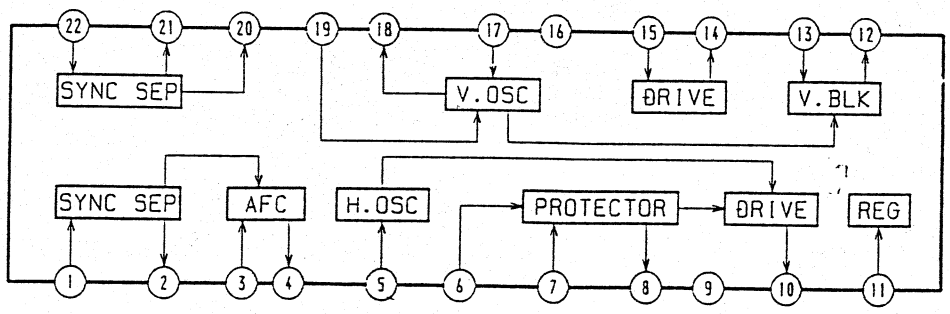
B-SS419.<U/C>-Q..
B-SS419.<U/C>-X..
B-SS419.<U/C>-H..
B-SS419.<U/C>-G..
B-SS419.<U/C>-G2.

RV651 : See Page11

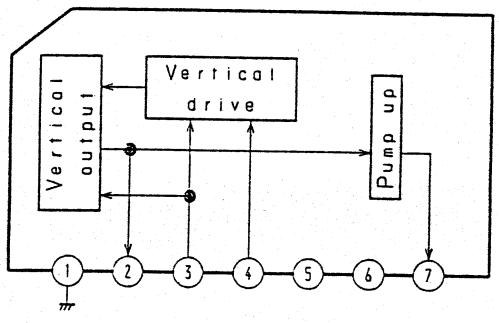


R508,R509 :See Page11

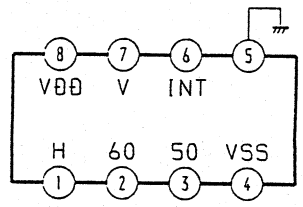
A BOARD IC501 UPC1377C



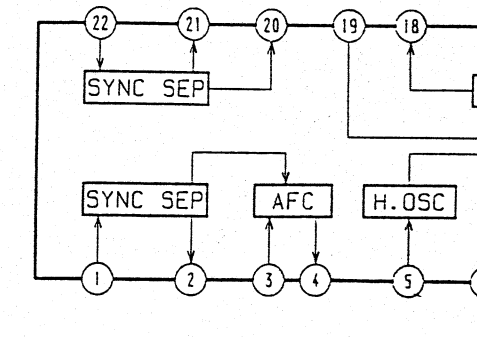
A BOARD IC401 LA7830



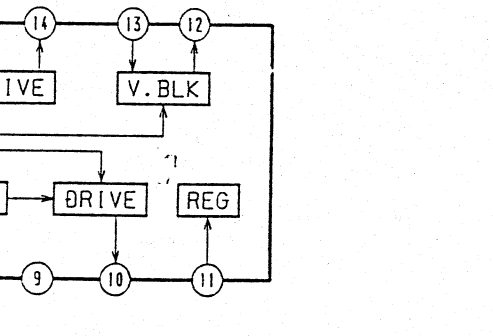
A BOARD IC502 CX23025



A BOARD IC301 MC4011



Q BOARD IC101,102,103 LA7016



A BOARD WAVEFORMS

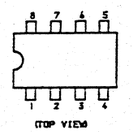
① 1.7 Vp-p (H)	② 1.3 Vp-p (H)	③ 0 Vp-p (H)
④ 20 Vp-p (H)	⑤ 0.25Vp-p (V)	⑥ 4 Vp-p (V)
⑦ 4 Vp-p (V)	⑧ 4 Vp-p (H)	⑨ 60M Vp-p (H)
⑩ 2.8 Vp-p (H)	⑪ 20 Vp-p (V)	⑫ 6.2 Vp-p (V)
⑬ 5 Vp-p (H)	⑭ 200 Vp-p (H)	

Q BOARD WAVEFORMS

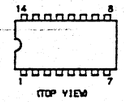
① 0.8 Vp-p (H)

5-4. SEMICONDUCTORS

CX23025



MS1978



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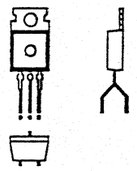
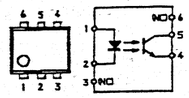
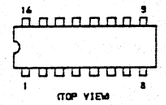


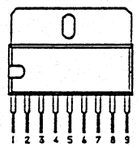
TLP732GR-LF2



HD14538BP

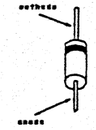


AN5265



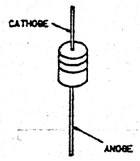
ERA38-06
RD6.2ESB2
MTZJ7.5B
RD20ESB2
1SS199
1N4148

FR105
FR304

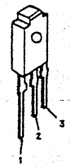


LA7016

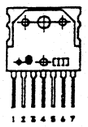
DTA144ES
DTC124ES



DAP236U



LA7830



KTC1815
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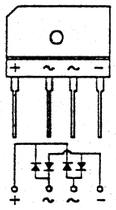
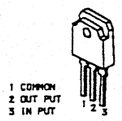
2SA1015
2SA1015-Y
2SC1815-GR

D2SB60



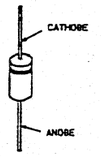
KLG124E

SI3122V

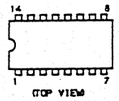


2SC2958
2SD774-34

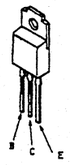
FR104
10E2



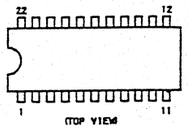
TC4011BP
TC4030BPHB



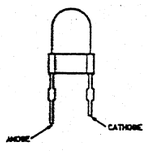
BU406



μPC1377C



SEL3810ELC05



SECTION 6
EXPLODED VIEWS

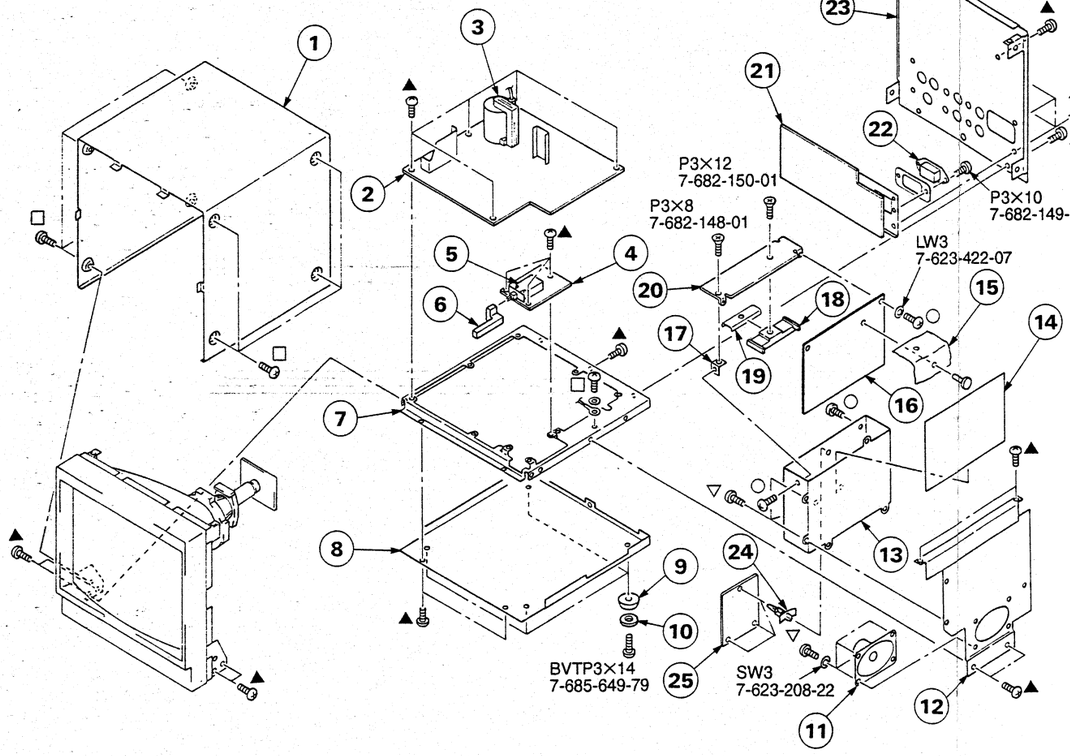
NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

6-1. CHASSIS (PVM-96/96E only)

▲: BVTP3×8 7-685-646-79
□: P4×8 7-682-561-01
○: P3×6 7-682-547-04
▽: BVTP3×6 7-685-645-79



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	★3-708-686-01	COVER, TOP	
2	★9-905-668-01	A BOARD, COMPLETE	
3	⚠9-905-666-01	TRANSFORMER ASSY, FLYBACK	
4	★9-905-698-01	F BOARD	
5	⚠1-571-433-11	SWITCH, PUSH (AC POWER)	
6	3-708-685-01	KNOB, POWER SW	
7	★3-708-689-01	CHASSIS, BOTTOM	
8	★3-708-688-01	COVER, BOTTOM	
9	3-708-672-01	FOOT	
10	4-041-091-01	CUSHION, FOOT	
11	1-544-063-11	SPEAKER	
12	★3-708-691-01	BRACKET, SUB (SMPS)	
13	★3-708-693-01	CASE (U, B), SHIELD	
14	★3-708-707-01	SHEET, PC	
15	3-708-708-01	RUBBER	
16	★9-905-683-01	G BOARD, COMPLETE	
17	★3-708-684-01	BRACKET, HEAT SINK	
18	3-708-673-01	HOLDER, IC	
19	★3-708-681-01	BRACKET, IC	
20	★3-708-692-01	HEAT SINK-AL	
21	★9-905-707-01	Q BOARD, COMPLETE	
22	⚠1-560-222-21	AC INLET	
23	★3-708-687-01	COVER, BACK	
24	3-703-353-03	SUPPORT, PC BOARD	
25	★9-905-708-01	G2 BOARD, COMPLETE	

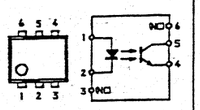
SECTION 6
EXPLODED VIEWS

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

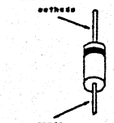
The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

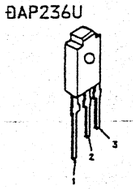
TLP732GR-LF2



FR105
FR304



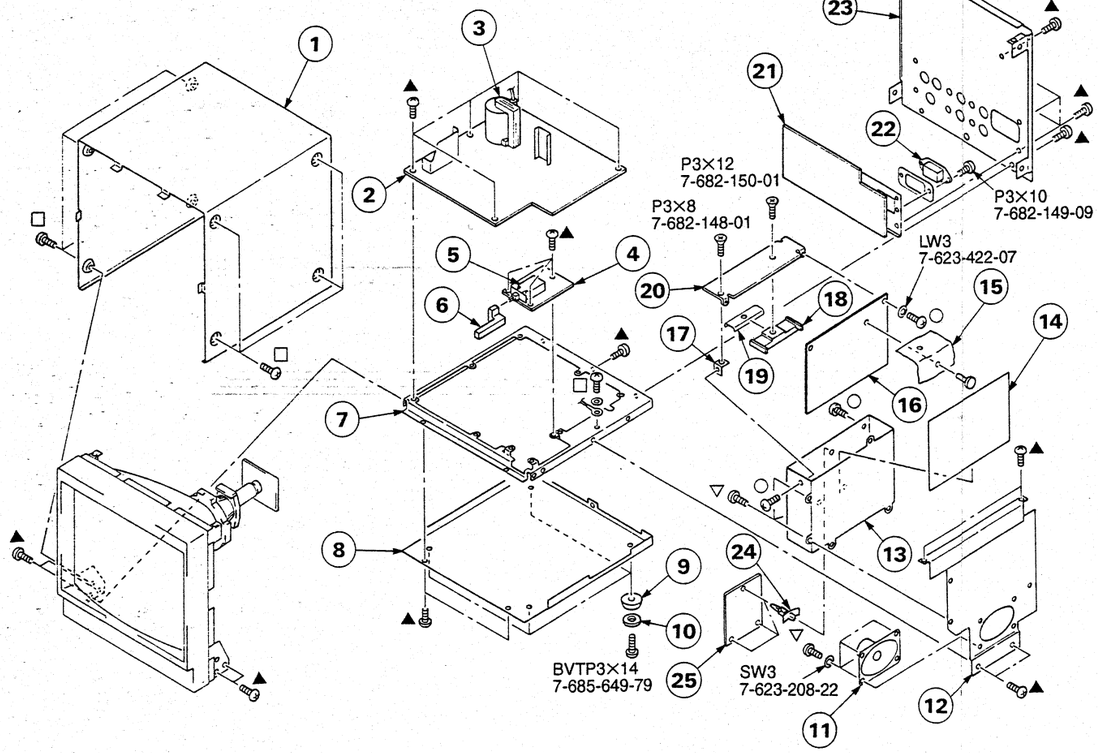
ĐAP236U



KLG124E

6-1. CHASSIS (PVM-96/96E only)

▲: BVTP3×8 7-685-646-79
□: P4×8 7-682-561-01
○: P3×6 7-682-547-04
▽: BVTP3×6 7-685-645-79



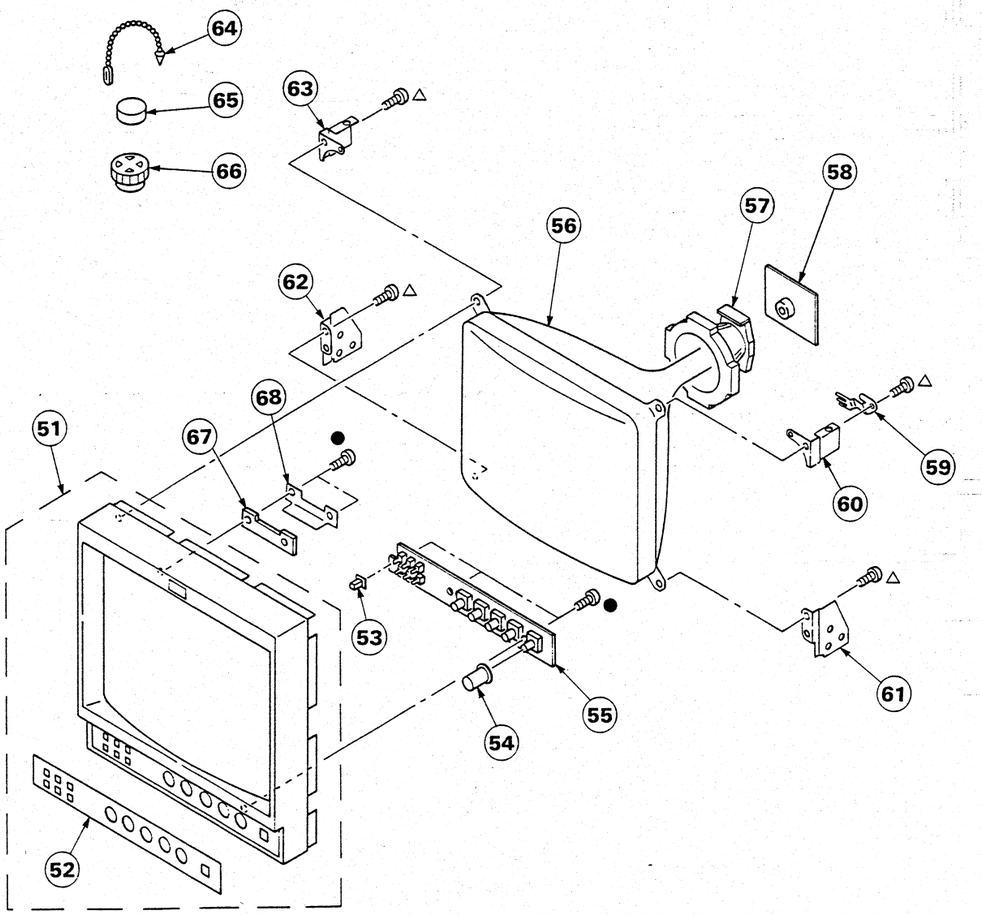
REF. NO.	PART NO.	DESCRIPTION	REMARK
1	✱3-708-686-01	COVER, TOP	
2	✱9-905-668-01	A BOARD, COMPLETE	
3	⚠9-905-666-01	TRANSFORMER ASSY, FLYBACK	
4	✱9-905-698-01	F BOARD	
5	⚠1-571-433-11	SWITCH, PUSH (AC POWER)	
6	3-708-685-01	KNOB, POWER SW	
7	✱3-708-689-01	CHASSIS, BOTTOM	
8	✱3-708-688-01	COVER, BOTTOM	
9	3-708-672-01	FOOT	
10	4-041-091-01	CUSHION, FOOT	
11	1-544-063-11	SPEAKER	
12	✱3-708-691-01	BRACKET, SUB (SMPS)	
13	✱3-708-693-01	CASE (U, B), SHIELD	
14	✱3-708-707-01	SHEET, PC	
15	3-708-708-01	RUBBER	
16	✱9-905-683-01	G BOARD, COMPLETE	
17	✱3-708-684-01	BRACKET, HEAT SINK	
18	3-708-673-01	HOLDER, IC	
19	✱3-708-681-01	BRACKET, IC	
20	✱3-708-692-01	HEAT SINK-AL	
21	✱9-905-707-01	Q BOARD, COMPLETE	
22	⚠1-560-222-21	AC INLET	
23	✱3-708-687-01	COVER, BACK	
24	3-703-353-03	SUPPORT, PC BOARD	
25	✱9-905-708-01	G2 BOARD, COMPLETE	

6-2. PICTURE TUBE (PVM-96/96E only)

●: BVTP3×12 7-685-648-79
△: BVTP4×14 7-685-662-14

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifie une trame et une marque ⚠ critiques pour la securite.
remplacer que par une portant le numero specifie.



REF. NO.	PART NO.	DESCRIPTION	REMARK
51	X-3705-089-1	BEZEL ASSY	52
52	3-708-694-01	PLATE, CONTROL	
53	3-708-711-01	KNOB, PUSH SW	
54	3-708-680-01	KNOB, CONTROL	
55	✱9-905-695-01	H BOARD	
56	⚠9-905-701-01	PICTURE TUBE (C9D01SWH1)	
57	⚠9-905-699-01	DEFLECTION YOKE	
58	✱9-905-690-01	C BOARD	
59	3-708-682-01	SPRING, CRT GROUND	
60	✱3-708-678-01	BRACKET-R (TOP), CRT	
61	✱3-708-679-01	BRACKET-R (BOTTOM), CRT	
62	✱3-708-677-01	BRACKET-L (BOTTOM), CRT	
63	✱3-708-676-01	BRACKET-L (TOP), CRT	
64	4-308-870-00	CLIP, LEAD WIRE	
65	1-452-032-00	MAGNET, DISK;10MM ϕ	
66	1-452-094-00	MAGNET, ROTATABLE DISK;15MM ϕ	
67	✱9-905-696-01	X BOARD	
68	✱3-708-709-01	PLATE, LIGHT INTERCEPTION	

SECTION 6
EXPLODED VIEWS

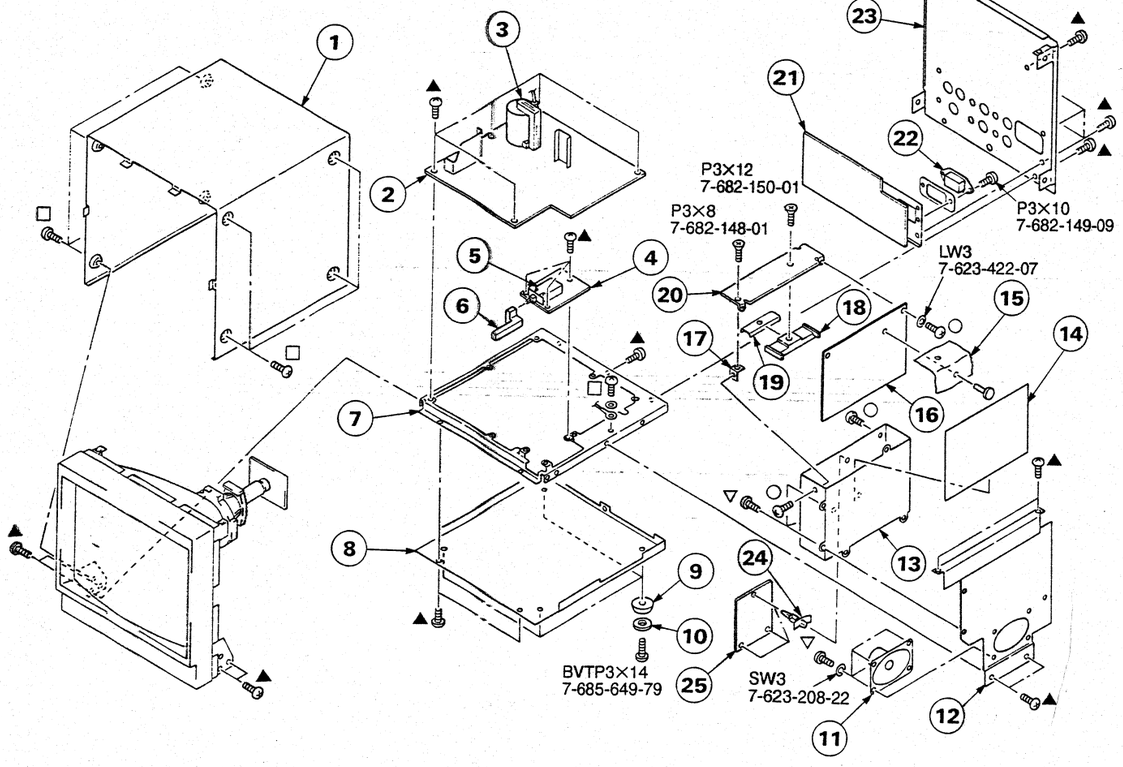
NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

6-1. CHASSIS (PVM-96/96E only)

▲: BVTP3×8 7-685-646-79
□: P4×8 7-682-561-01
○: P3×6 7-682-547-04
▽: BVTP3×6 7-685-645-79



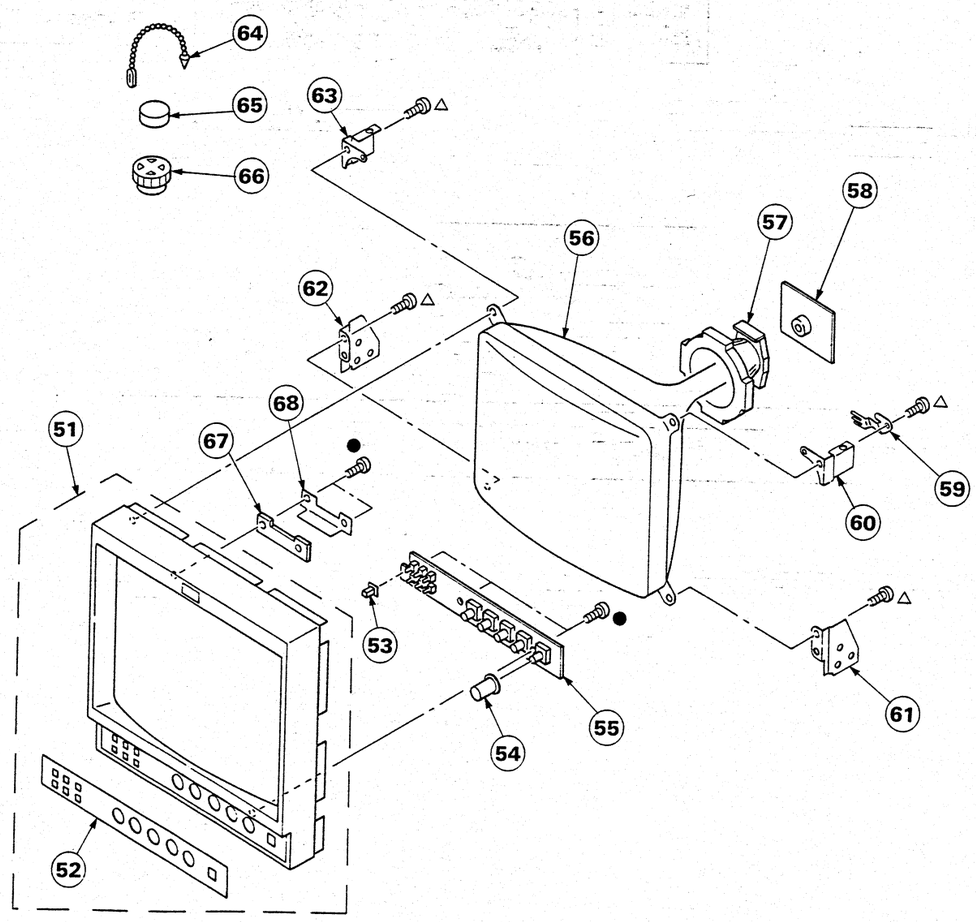
REF. NO.	PART NO.	DESCRIPTION	REMARK
1	*3-708-686-01	COVER, TOP	
2	*9-905-668-01	A BOARD, COMPLETE	
3	⚠9-905-666-01	TRANSFORMER ASSY, FLYBACK	
4	*9-905-698-01	F BOARD	
5	⚠1-571-433-11	SWITCH, PUSH (AC POWER)	
6	3-708-685-01	KNOB, POWER SW	
7	*3-708-689-01	CHASSIS, BOTTOM	
8	*3-708-688-01	COVER, BOTTOM	
9	3-708-672-01	FOOT	
10	4-041-091-01	CUSHION, FOOT	
11	1-544-063-11	SPEAKER	
12	*3-708-691-01	BRACKET, SUB (SMPS)	
13	*3-708-693-01	CASE (U, B), SHIELD	
14	*3-708-707-01	SHEET, PC	
15	3-708-708-01	RUBBER	
16	*9-905-683-01	G BOARD, COMPLETE	
17	*3-708-684-01	BRACKET, HEAT SINK	
18	3-708-673-01	HOLDER, IC	
19	*3-708-681-01	BRACKET, IC	
20	*3-708-692-01	HEAT SINK-AL	
21	*9-905-707-01	Q BOARD, COMPLETE	
22	⚠1-560-222-21	AC INLET	
23	*3-708-687-01	COVER, BACK	
24	3-703-353-03	SUPPORT, PC BOARD	
25	*9-905-708-01	G2 BOARD, COMPLETE	

6-2. PICTURE TUBE (PVM-96/96E only)

●: BVTP3×12 7-685-648-79
△: BVTP4×14 7-685-662-14

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

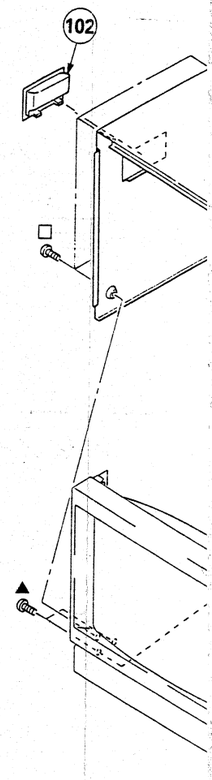
Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.



REF. NO.	PART NO.	DESCRIPTION	REMARK
51	X-3705-089-1	BEZEL ASSY	52
52	3-708-694-01	PLATE, CONTROL	
53	3-708-711-01	KNOB, PUSH SW	
54	3-708-680-01	KNOB, CONTROL	
55	*9-905-695-01	H BOARD	
56	⚠9-905-701-01	PICTURE TUBE (C9D01SWH1)	
57	⚠9-905-699-01	DEFLECTION YOKE	
58	*9-905-690-01	C BOARD	
59	3-708-682-01	SPRING, CRT GROUND	
60	*3-708-678-01	BRACKET-R (TOP), CRT	
61	*3-708-679-01	BRACKET-R (BOTTOM), CRT	
62	*3-708-677-01	BRACKET-L (BOTTOM), CRT	
63	*3-708-676-01	BRACKET-L (TOP), CRT	
64	4-308-870-00	CLIP, LEAD WIRE	
65	1-452-032-00	MAGNET, DISK;10MM ϕ	
66	1-452-094-00	MAGNET, ROTATABLE DISK;15MM ϕ	
67	*9-905-696-01	X BOARD	
68	*3-708-709-01	PLATE, LIGHT INTERCEPTION	

6-3. CHAS

▲: BVTP3×8
□: P4×8
○: P3×6
▽: BVTP3×6



REF. NO.	PART NO.
101	*3-708-705-01
102	4-382-597-81
103	*9-905-706-01
104	⚠9-905-666-01
105	*9-905-698-01
106	⚠1-571-433-11
107	3-708-685-01
108	*3-708-702-01
109	*3-708-703-01
110	3-708-697-01
111	*3-708-693-01

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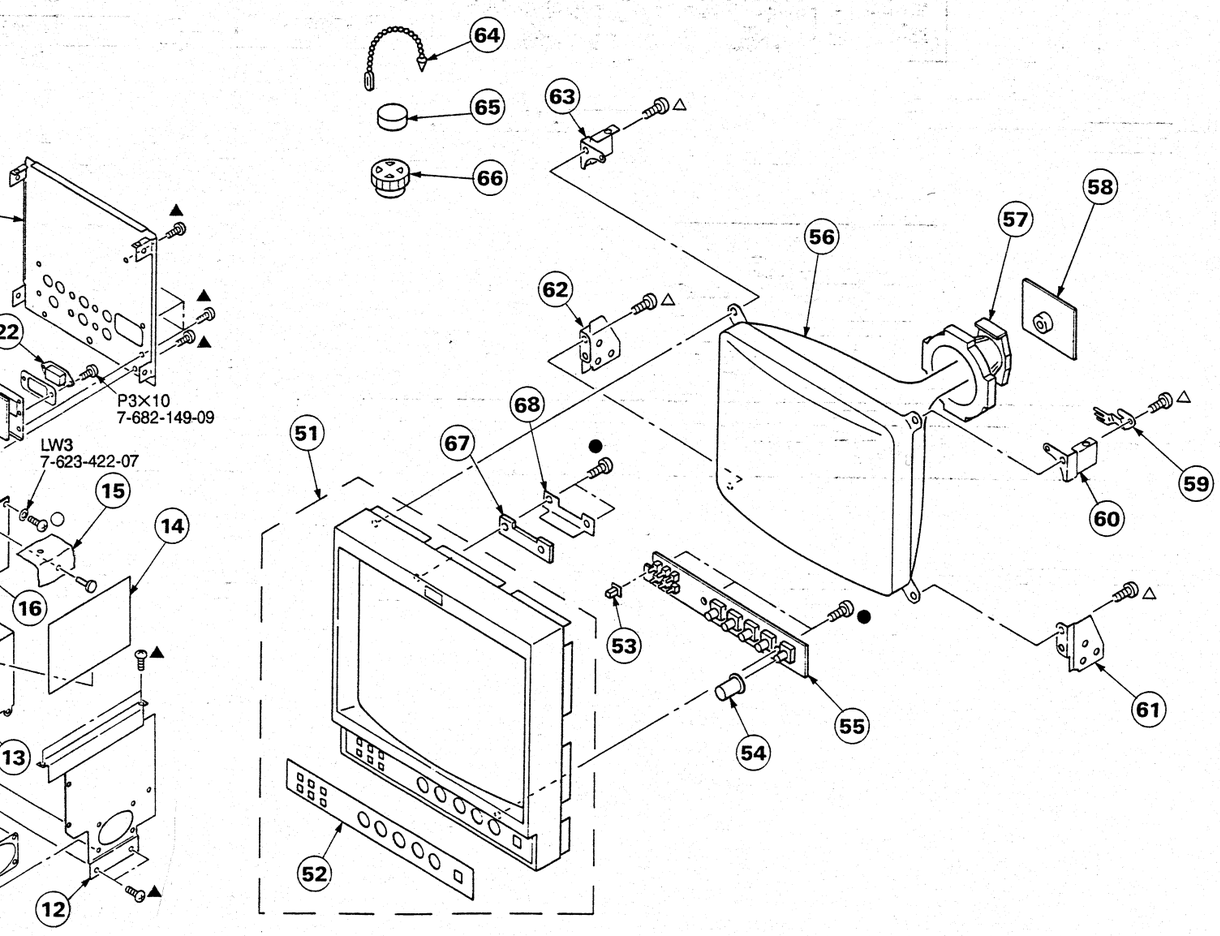
marque ⚠
la securite.
que par une
ero specifie.

6-2. PICTURE TUBE (PVM-96/96E only)

●: BVTP3×12 7-685-648-79
△: BVTP4×14 7-685-662-14

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.



REMARK	REF. NO.	PART NO.	DESCRIPTION
	51	X-3705-089-1	BEZEL ASSY
	52	3-708-694-01	PLATE, CONTROL
	53	3-708-711-01	KNOB, PUSH SW
	54	3-708-680-01	KNOB, CONTROL
	55	✱9-905-695-01	H BOARD
	56	⚠9-905-701-01	PICTURE TUBE (C9D01SWH1)
	57	⚠9-905-699-01	DEFLECTION YOKE
	58	✱9-905-690-01	C BOARD
	59	3-708-682-01	SPRING, CRT GROUND

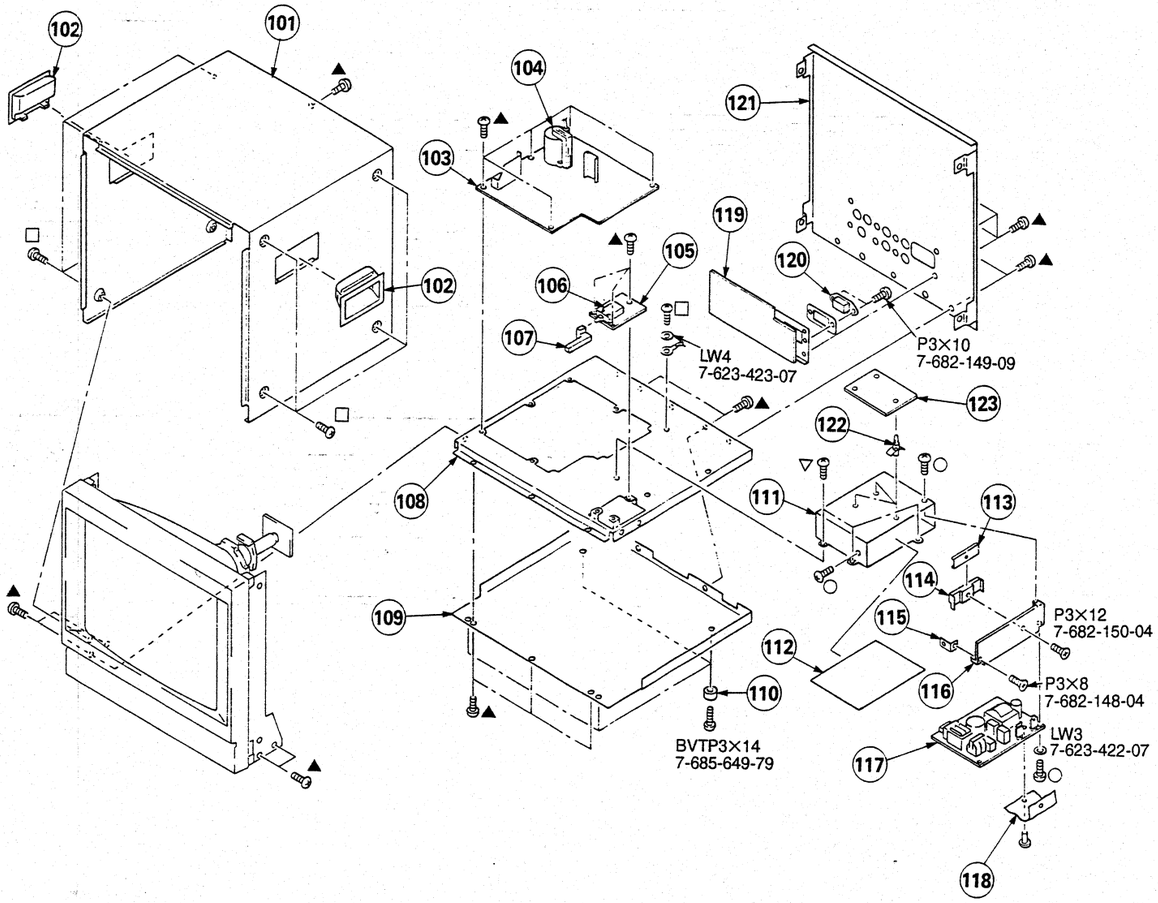
REMARK	REF. NO.	PART NO.	DESCRIPTION
	60	✱3-708-678-01	BRACKET-R (TOP), CRT
	61	✱3-708-679-01	BRACKET-R (BOTTOM), CRT
	62	✱3-708-677-01	BRACKET-L (BOTTOM), CRT
	63	✱3-708-676-01	BRACKET-L (TOP), CRT
	64	4-308-870-00	CLIP, LEAD WIRE
	65	1-452-032-00	MAGNET, DISK;10MMϕ
	66	1-452-094-00	MAGNET, ROTATABLE DISK;15MMϕ
	67	✱9-905-696-01	X BOARD
	68	✱3-708-709-01	PLATE, LIGHT INTERCEPTION

6-3. CHASSIS (PVM-136/146E only)

▲: BVTP3×8 7-685-646-79
□: P4×8 7-682-561-01
○: P3×6 7-682-547-04
▽: BVTP3×6 7-685-645-79

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.



REMARK	REF. NO.	PART NO.	DESCRIPTION
	101	✱3-708-705-01	COVER, TOP
	102	4-382-597-81	HANDLE
	103	✱9-905-706-01	A BOARD, COMPLETE
	104	⚠9-905-666-01	TRANSFORMER ASSY, FLYBACK
	105	✱9-905-698-01	F BOARD
	106	⚠1-571-433-11	SWITCH, PUSH (AC POWER)
	107	3-708-685-01	KNOB, POWER SW
	108	✱3-708-702-01	CHASSIS, BOTTOM
	109	✱3-708-703-01	COVER, BOTTOM
	110	3-708-697-01	FOOT
	111	✱3-708-693-01	CASE (U, B), SHIELD

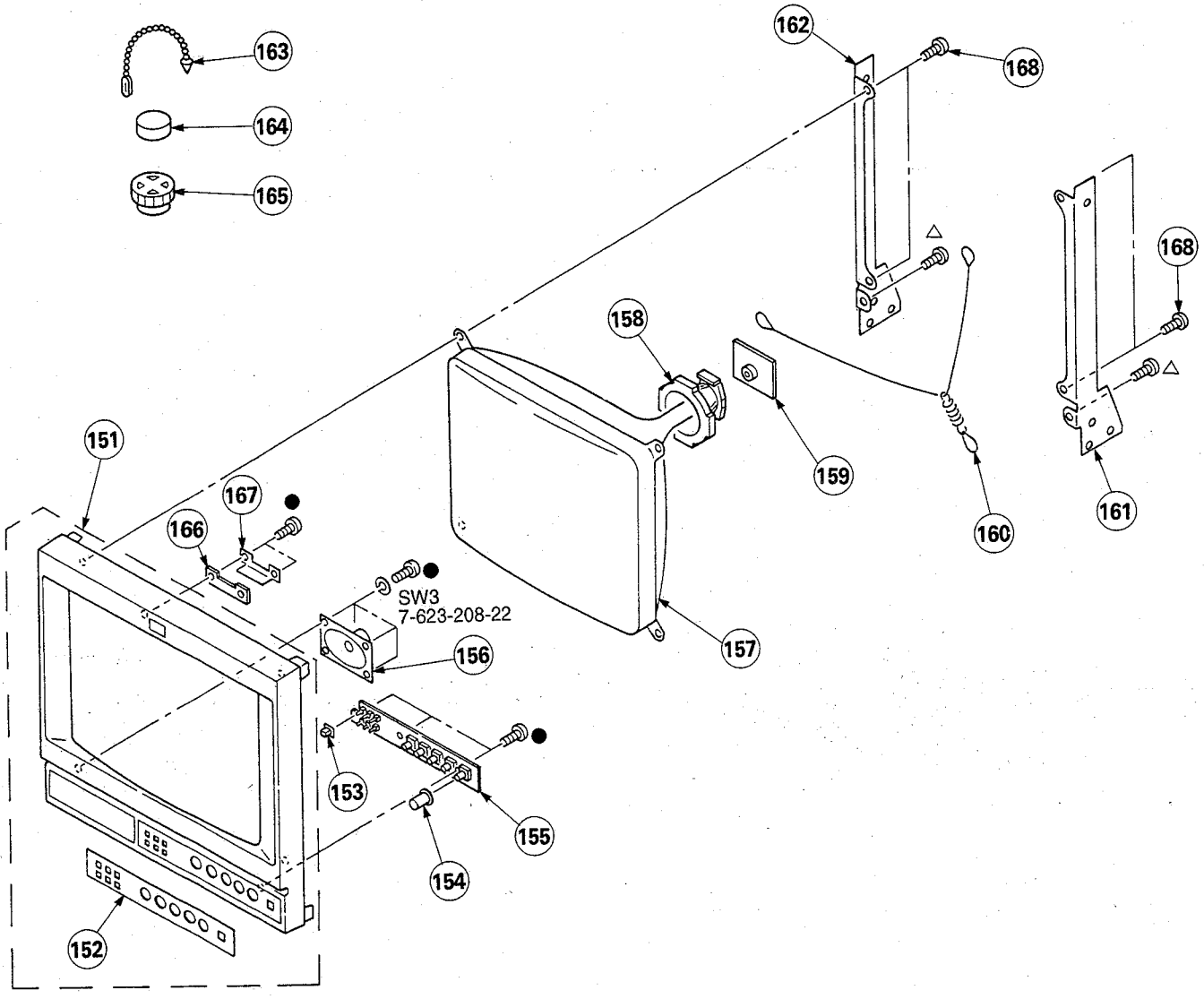
REMARK	REF. NO.	PART NO.	DESCRIPTION
	112	✱3-708-707-01	SHEET, PC
	113	✱3-708-681-01	BRACKET, IC
	114	3-708-673-01	HOLDER, IC
	115	✱3-708-684-01	BRACKET, HEAT SINK
	116	✱3-708-692-01	HEAT SINK-AL
	117	✱9-905-683-01	G BOARD, COMPLETE
	118	3-708-708-01	RUBBER
	119	9-905-707-01	Q BOARD, COMPLETE
	120	⚠1-560-222-21	AC INLET
	121	✱3-708-704-01	COVER, BACK
	122	3-703-353-03	SUPPORT, PC BOARD
	123	✱9-905-708-01	G2 BOARD, COMPLETE

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

6-4. PICTURE TUBE (PVM-136/146E only)

●: BVTP3×12 7-685-648-79
△: BVTP4×12 7-685-661-14



REF. NO.	PART NO.	DESCRIPTION	REMARK
151	X-3705-087-1	BEZEL ASSY	
152	3-708-694-01	PLATE, CONTROL	
153	3-708-711-01	KNOB, PUSH SW	
154	3-708-680-01	KNOB, CONTROL	
155	*9-905-695-01	H BOARD	
156	1-544-063-01	SPEAKER	
157	⚠9-905-703-01	PICTURE TUBE (C14D01SWH1)	
158	⚠9-905-699-01	DEFLECTION YOKE	
159	*9-905-690-01	C BOARD	
160	4-303-774-03	SPRING, CRT GROUND	
161	*3-708-699-01	BRACKET-R, CRT	
162	*3-708-698-01	BRACKET-L, CRT	
163	4-308-870-00	CLIP, LEAD WIRE	
164	1-452-032-00	MAGNET, DISK;10MM ϕ	
165	1-452-094-00	MAGNET, ROTATABLE DISK;15MM ϕ	
166	*9-905-696-01	X BOARD	
167	*9-708-710-01	PLATE, LIGHT INTERCEPTION	
168	4-365-808-01	SCREW, TAPPING 5×25	

A

SECTION 7
ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

When indicatng parts by reference number, please include the board name.

CAPACITORS
- MF: μF, PF: μμF

COILS
- MMH: mH, UH: μH

- The components identified by ⊠ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

REF. NO.	PART NO.	DESCRIPTION				REMARK
	*9-905-668-01	A BOARD, COMPLETE				(PVM-96/96E ONLY)
		**********				
	*9-905-706-01	A BOARD, COMPLETE				(PVM-136/146E ONLY)
		**********				
		<CAPACITOR>				
C201	1-124-910-11	ELECT	47MF	20%	16V	
C202	1-124-120-11	ELECT	220MF	20%	16V	
C203	1-124-910-11	ELECT	47MF	20%	16V	
C204	1-108-812-11	FILM	0.047MF	5%	50V	
C205	1-108-812-11	FILM	0.047MF	5%	50V	
C206	1-101-880-00	CERAMIC	47PF	5%	50V	
C207	1-101-880-00	CERAMIC	47PF	5%	50V	
C208	1-102-971-00	CERAMIC	82PF	5%	50V	
~~C209~~	~~1-124-041-11~~	ELECT	220MF	20%	16V	
C210	1-123-369-00	ELECT	4.7MF	20%	50V	
C211	1-101-884-00	CERAMIC	56PF	5%	50V	
C212	1-102-971-00	CERAMIC	82PF	5%	50V	
C213	1-124-910-11	ELECT	47MF	20%	16V	
C214	1-123-369-00	ELECT	4.7MF	20%	50V	
C215	1-101-004-00	CERAMIC	0.01MF		50V	
C216	1-126-964-11	ELECT	10MF	20%	16V	
C217	1-108-816-11	FILM	0.1MF	5%	50V	
C218	1-102-971-00	CERAMIC	82PF	5%	50V	
C219	1-102-116-00	CERAMIC	680PF	10%	50V	
C220	1-123-949-00	ELECT	33MF	20%	200V	
C221	1-123-949-00	ELECT	10MF	20%	200V	
C222	1-124-903-11	ELECT	1MF	20%	50V	
C223	1-126-101-11	ELECT	100MF	20%	16V	
C224	1-126-964-11	ELECT	10MF	20%	16V	
C225	1-102-824-00	CERAMIC	470PF	5%	50V	
C226	1-102-824-00	CERAMIC	470PF	5%	50V	
C227	1-124-910-11	ELECT	47MF	20%	16V	
C228	1-108-812-11	FILM	0.047MF	5%	50V	
C229	1-101-004-00	CERAMIC	0.01MF		50V	
C230	1-124-903-11	ELECT	1MF	20%	50V	
C231	1-102-118-00	CERAMIC	0.0012MF	10%	50V	
C301	1-124-120-11	ELECT	220MF	20%	16V	
C302	1-101-361-00	CERAMIC	150PF	5%	50V	
C303	1-108-688-11	FILM	0.0047MF	10%	200V	
C304	1-126-964-11	ELECT	10MF	20%	16V	
C305	1-102-119-00	ELECT	0.0015MF	10%	50V	
C306	1-124-903-11	ELECT	1MF	20%	50V	
C307	1-108-798-11	FILM	0.0033MF	5%	50V	
C308	1-108-792-11	FILM	0.001MF	5%	50V	
C309	1-126-964-11	ELECT	10MF	20%	16V	
C310	1-108-814-11	FILM	0.068MF	5%	50V	
C311	1-126-964-11	ELECT	10MF	20%	16V	
C312	1-126-964-11	ELECT	10MF	20%	16V	
C313	1-130-483-00	FILM	0.01MF	5%	50V	
C314	1-130-483-00	FILM	0.01MF	5%	50V	
C315	1-129-898-00	FILM	0.0022MF	10%	630V	
C316	1-108-680-11	FILM	0.001MF	10%	100V	
C317	1-102-973-00	CERAMIC	100PF	5%	50V	
C318	1-106-359-00	FILM	0.0047MF	5%	50V	
C319	1-124-903-11	ELECT	1MF	20%	50V	
C320	1-124-903-11	ELECT	1MF	20%	50V	
C321	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C322	1-124-903-11	ELECT	1MF	20%	50V	
C323	1-101-004-00	CERAMIC	0.01MF		50V	
C326	1-101-004-00	CERAMIC	0.01MF		50V	
C327	1-101-004-00	CERAMIC	0.01MF		50V	
C401	1-124-902-00	ELECT	0.47MF	20%	50V	
C402	1-124-903-11	ELECT	1MF	20%	50V	
C403	1-108-843-11	FILM	0.033MF	10%	50V	
C404	1-124-360-00	ELECT	1000MF	10%	16V	
C405	1-130-483-00	FILM	0.01MF	5%	50V	
C406	1-124-903-11	ELECT	1MF	20%	50V	
C407	1-108-812-11	FILM	0.047MF	5%	50V	
C408	1-131-345-00	TANTALUM	0.47MF	20%	35V	
C409	1-108-802-11	FILM	0.0068MF	5%	50V	
C410	1-124-580-11	ELECT	330MF	20%	35V	
C411	1-124-572-11	ELECT	100MF	20%	50V	
C412	1-102-116-00	FILM	680PF	5%	50V	
C413	1-102-820-00	CERAMIC	330PF	5%	50V	
C414	1-102-980-00	CERAMIC	270PF	5%	50V	
C415	1-101-004-00	CERAMIC	0.01MF		50V	
C416	1-131-352-00	TANTALUM	6.8MF	20%	35V	
C417	1-124-480-11	ELECT	470MF	20%	25V	
C418	1-101-004-00	CERAMIC	0.01MF		50V	
C419	1-161-772-11	CERAMIC	0.1MF	20%	50V	
C420	1-124-478-11	ELECT	100MF	20%	25V	
C501	1-130-483-00	FILM	0.01MF	5%	50V	
C502	1-123-382-00	ELECT	3.3MF	20%	50V	
C503	1-102-820-00	CERAMIC	330PF	5%	50V	
C504	1-126-964-11	ELECT	10MF	20%	16V	
C505	1-108-812-11	FILM	0.047MF	5%	50V	
C506	1-101-884-00	CERAMIC	56PF	5%	50V	
C507	1-106-351-00	FILM	0.0022MF	5%	50V	
C508	1-130-485-00	FILM	0.015MF	5%	50V	
C509	1-108-808-11	FILM	0.022MF	5%	50V	
C510	1-126-964-11	ELECT	10MF	20%	16V	
C511	1-126-964-11	ELECT	10MF	20%	16V	
C512	1-123-381-00	ELECT	2.2MF	20%	50V	
C513	1-123-381-00	ELECT	2.2MF	20%	50V	
C514	1-126-964-11	ELECT	10MF	20%	16V	
C515	1-108-812-11	FILM	0.047MF	5%	50V	

REF.NO.	PART NO.	DESCRIPTION				REMARK
C516	1-108-684-11	FILM	0.0022MF	10%	200V	
C517	1-106-351-00	FILM	0.0022MF	10%	100V	
C518	1-129-720-00	FILM	0.033MF	10%	630V	
C519	1-136-598-11	FILM	3.0MF		200V	
C520	1-102-030-00	CERAMIC	330PF	10%	400V	
C521	1-101-361-00	CERAMIC	150PF	5%	500V	
C522	1-108-792-11	FILM	0.001MF	5%	50V	
C523	1-129-717-00	FILM	0.018MF	10%	630V	(PVM-96/96E ONLY)
C523	1-129-716-00	FILM	0.015MF	10%	630V	(PVM-136/146E ONLY)
C524	1-136-557-11	FILM	0.0033MF	10%	630V	
C525	1-126-105-11	ELECT	1000MF	20%	35V	
C526	1-126-105-11	ELECT	1000MF	20%	35V	
C527	1-124-120-11	ELECT	220MF	20%	25V	
C528	1-136-244-11	FILM	0.1MF	5%	50V	
C529	1-124-667-11	ELECT	10MF	20%	50V	
C530	1-130-710-00	FILM	0.1MF	20%	250V	
C531	1-108-686-11	FILM	0.0033MF	10%	200V	
C532	1-108-626-11	FILM	0.01MF	10%	100V	

<CONNECTOR>

CN201	*9-905-674-01	CONNECTOR 8P	
CN202	*9-905-673-01	CONNECTOR 6P	
CN203	*9-905-672-01	CONNECTOR 5P	
CN301	*9-905-673-01	CONNECTOR 6P	
CN302	*9-905-674-01	CONNECTOR 8P	
CN303	*9-905-670-01	CONNECTOR 2P	
CN401	*9-905-676-01	CONNECTOR 2P L	
CN501	*9-905-671-01	CONNECTOR 3P	
CN502	*9-905-676-01	CONNECTOR 2P L	
CN503	*9-905-671-01	CONNECTOR 3P	

<DIODE>

D201	8-719-921-63	DIODE MTZJ-7.5B	
D202	8-719-200-02	DIODE 10E2	
D203	8-719-200-02	DIODE 10E2	
D204	9-905-660-01	DIODE FR105	
D205	8-719-911-19	DIODE 1SS119	
D206	8-719-911-19	DIODE 1SS119	
D207	8-719-911-19	DIODE 1SS119	
D208	8-719-911-19	DIODE 1SS119	
D301	8-719-911-19	DIODE 1SS119	
D302	8-719-911-19	DIODE 1SS119	
D303	8-719-911-19	DIODE 1SS119	
D304	8-719-911-19	DIODE 1SS119	
D305	8-719-911-19	DIODE 1SS119	
D307	8-719-911-19	DIODE 1SS119	
D308	8-719-911-19	DIODE 1SS119	
D309	8-719-911-19	DIODE 1SS119	
D310	8-719-911-19	DIODE 1SS119	
D311	8-719-911-19	DIODE 1SS119	
D312	8-719-911-19	DIODE 1SS119	
D313	8-719-911-19	DIODE 1SS119	
D314	8-719-911-19	DIODE 1SS119	
D315	8-719-911-19	DIODE 1SS119	
D316	8-719-911-19	DIODE 1SS119	
D401	8-719-911-19	DIODE 1SS119	
D402	8-719-911-19	DIODE 1SS119	
D403	8-719-911-19	DIODE 1SS119	
D404	8-719-200-02	DIODE 10E2	
D501	8-719-911-19	DIODE 1SS119	
D502	8-719-109-89	DIODE RD5.6ESB2	

REF.NO.	PART NO.	DESCRIPTION	REMARK
D503	8-719-911-19	DIODE 1SS119	
D504	8-719-911-19	DIODE 1SS119	
D505	8-719-911-19	DIODE 1SS119	
D506	8-719-901-17	DIODE V11L	
D507	8-719-911-19	DIODE 1SS119	
D508	8-719-911-19	DIODE 1SS119	
D511	8-719-911-19	DIODE 1SS119	
D512	9-905-661-01	DIODE FR304	
D513	8-719-985-76	DIODE FR104	
D514	8-719-985-76	DIODE FR104	

<IC>

IC201	8-759-207-73	IC TC4030BPHB
IC301	8-759-240-11	IC TC4011BP
IC302	8-759-207-73	IC TC4030BPHB
IC303	8-759-345-38	IC HD14538BP
IC304	8-759-345-38	IC HD14538BP
IC401	8-759-801-98	IC LA7830
IC501	8-759-100-60	IC UPC1377C
IC502	8-759-909-70	IC CX23025
IC503	8-749-931-22	IC SI3122V

<VIBRATOR>

L201	1-409-332-00	CERAMIC TRAP 4.43MHz
L202	1-577-099-11	VIBRATOR CERAMIC 3.58MHz

<COIL>

L203	1-408-421-00	INDUCTOR 100UH
L204	1-408-402-00	INDUCTOR 2.7UH
L205	1-408-411-00	INDUCTOR 15UH
L206	1-408-411-00	INDUCTOR 15UH
L207	1-408-417-00	INDUCTOR 47UH
L208	1-408-411-00	INDUCTOR 15UH
L401	1-408-411-00	INDUCTOR 15UH
L501	1-410-093-11	INDUCTOR 33MMH
L502	9-905-662-01	INDUCTOR WIDTH COIL 34UH
L503	9-905-663-01	INDUCTOR H-WIDTH COIL 34UH
L504	9-905-664-01	INDUCTOR HLC 80UH
L505	1-410-668-11	INDUCTOR 27UH

<TRANSISTOR>

Q201	8-729-281-53	TRANSISTOR 2SC1815-GR
Q202	8-729-173-38	TRANSISTOR 2SA733-K
Q203	8-729-900-36	TRANSISTOR DTC124ES
Q204	8-729-900-36	TRANSISTOR DTC124ES
Q205	8-729-281-53	TRANSISTOR 2SC1815-GR
Q206	8-729-281-53	TRANSISTOR 2SC1815-GR
Q207	8-729-281-53	TRANSISTOR 2SC1815-GR
Q208	8-729-281-53	TRANSISTOR 2SC1815-GR
Q209	8-729-281-53	TRANSISTOR 2SC1815-GR
Q210	8-729-281-53	TRANSISTOR 2SC1815-GR
Q211	8-729-281-53	TRANSISTOR 2SC1815-GR
Q212	8-729-281-53	TRANSISTOR 2SC1815-GR
Q213	8-729-321-61	TRANSISTOR 2SC1514
Q214	8-729-281-53	TRANSISTOR 2SC1815-GR

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REF. NO.	PART NO.	DESCRIPTION	REMARK
Q215	8-729-281-53	TRANSISTOR 2SC1815-GR	
Q216	8-729-281-53	TRANSISTOR 2SC1815-GR	
Q217	8-729-281-53	TRANSISTOR 2SC1815-GR	
Q218	8-729-173-38	TRANSISTOR 2SA733-K	
Q219	8-729-900-65	TRANSISTOR DTA144ES	
Q220	8-729-900-36	TRANSISTOR DTC124ES	
Q221	8-729-281-53	TRANSISTOR 2SC1815-GR	
Q222	8-729-900-36	TRANSISTOR DTC124ES	
Q301	8-729-900-65	TRANSISTOR DTA144ES	
Q302	8-729-900-65	TRANSISTOR DTA144ES	
Q303	8-729-900-36	TRANSISTOR DTC124ES	
Q304	8-729-900-65	TRANSISTOR DTA144ES	
Q305	8-729-900-36	TRANSISTOR DTC124ES	
Q306	8-729-900-65	TRANSISTOR DTA144ES	
Q401	8-729-900-65	TRANSISTOR DTA144ES	
Q402	8-729-900-36	TRANSISTOR DTC124ES	
Q403	8-729-900-36	TRANSISTOR DTC124ES	
Q404	8-729-900-36	TRANSISTOR DTC124ES	
Q405	8-729-900-36	TRANSISTOR DTC124ES	
Q501	8-729-900-36	TRANSISTOR DTC124ES	
Q502	8-729-900-36	TRANSISTOR DTC124ES	
Q503	8-729-111-55	TRANSISTOR 2SD1312-K	
Q504	8-729-111-55	TRANSISTOR 2SD1312-K	
Q505	9-995-367-01	TRANSISTOR BU406	

<RESISTOR>

R201	1-249-429-11	CARBON	10K	5%	1/4W
R202	1-249-431-11	CARBON	15K	5%	1/4W
R203	1-249-415-11	CARBON	680	5%	1/4W
R204	1-249-410-11	CARBON	270	5%	1/4W
R205	1-249-427-11	CARBON	6.8K	5%	1/4W
R206	1-249-409-11	CARBON	220	5%	1/4W
R207	1-249-410-11	CARBON	270	5%	1/4W
R208	1-249-413-11	CARBON	470	5%	1/4W
R209	1-249-405-11	CARBON	100	5%	1/4W
R210	1-249-433-11	CARBON	22K	5%	1/4W
R211	1-249-411-11	CARBON	330	5%	1/4W
R212	1-249-417-11	CARBON	1K	5%	1/4W
R213	1-249-417-11	CARBON	1K	5%	1/4W
R214	1-249-420-11	CARBON	1.8K	5%	1/4W
R215	1-249-428-11	CARBON	8.2K	5%	1/4W
R216	1-249-426-11	CARBON	5.6K	5%	1/4W
R217	1-249-417-11	CARBON	1K	5%	1/4W
R218	1-249-405-11	CARBON	100	5%	1/4W
R219	1-249-417-11	CARBON	1K	5%	1/4W
R220	1-249-414-11	CARBON	560	5%	1/4W
R221	1-249-401-11	CARBON	47	5%	1/4W
R222	1-216-482-11	METAL OXIDE	1.8K	5%	3W
R223	1-247-891-00	CARBON	330K	5%	1/4W
R224	1-249-405-11	CARBON	100	5%	1/4W
R225	1-247-841-11	CARBON	2.7K	5%	1/4W
R226	1-247-809-31	CARBON	120	5%	1/4W
R227	1-249-417-11	CARBON	1K	5%	1/4W
R228	1-249-430-11	CARBON	12K	5%	1/4W
R229	1-249-415-11	CARBON	680	5%	1/4W
R230	1-249-420-11	CARBON	1.8K	5%	1/4W
R231	1-249-429-11	CARBON	10K	5%	1/4W
R232	1-249-429-11	CARBON	10K	5%	1/4W
R233	1-247-429-11	CARBON	10K	5%	1/4W
R234	1-249-433-11	CARBON	22K	5%	1/4W
R235	1-249-409-11	CARBON	220	5%	1/4W
R236	1-249-429-11	CARBON	10K	5%	1/4W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R237	1-249-429-11	CARBON	10K	5%	1/4W
R238	1-249-441-11	CARBON	100K	5%	1/4W
R239	1-249-429-11	CARBON	10K	5%	1/4W
R240	1-249-429-11	CARBON	10K	5%	1/4W
R241	1-249-429-11	CARBON	10K	5%	1/4W
R242	1-249-437-11	CARBON	47K	5%	1/4W
R243	1-247-897-11	CARBON	560K	5%	1/4W
R244	1-249-428-11	CARBON	8.2K	5%	1/4W
R245	1-249-417-11	CARBON	1K	5%	1/4W
R246	1-249-413-11	CARBON	470	5%	1/4W
R247	1-249-418-11	CARBON	1.2K	5%	1/4W
R248	1-249-416-11	CARBON	820	5%	1/4W
R249	1-247-843-31	CARBON	3.3K	5%	1/4W
R250	1-249-429-11	CARBON	10K	5%	1/4W
R251	1-249-429-11	CARBON	10K	5%	1/4W
R252	1-249-421-11	CARBON	2.2K	5%	1/4W
R253	1-247-847-31	CARBON	4.7K	5%	1/4W
R254	1-249-419-00	CARBON	1.5K	5%	1/4W
R255	1-249-408-11	CARBON	180	5%	1/4W
R256	1-249-405-11	CARBON	100	5%	1/4W
R257	1-249-417-11	CARBON	1K	5%	1/4W
R258	1-249-410-11	CARBON	270	5%	1/4W
R259	1-249-413-11	CARBON	470	5%	1/4W
R260	1-247-903-11	CARBON	1M	5%	1/4W
R301	1-249-430-11	CARBON	12K	5%	1/4W
R302	1-247-847-31	CARBON	4.7K	5%	1/4W
R303	1-249-433-11	CARBON	22K	5%	1/4W
R304	1-249-411-11	CARBON	330	5%	1/4W
R305	1-249-429-11	CARBON	10K	5%	1/4W
R306	1-249-441-11	CARBON	100K	5%	1/4W
R307	1-249-422-11	CARBON	2.7K	5%	1/4W
R308	1-249-430-11	CARBON	12K	5%	1/4W
R309	1-249-417-11	CARBON	1K	5%	1/4W
R310	1-249-430-11	CARBON	12K	5%	1/4W
R311	1-249-429-11	CARBON	10K	5%	1/4W
R312	1-249-429-11	CARBON	10K	5%	1/4W
R313	1-249-441-11	CARBON	100K	5%	1/4W
R314	1-249-429-11	CARBON	10K	5%	1/4W
R315	1-249-417-11	CARBON	1K	5%	1/4W
R316	1-249-439-11	CARBON	68K	5%	1/4W
R317	1-247-847-31	CARBON	4.7K	5%	1/4W
R318	1-249-417-11	CARBON	1K	5%	1/4W
R319	1-249-439-11	CARBON	68K	5%	1/4W
R320	1-247-847-31	CARBON	4.7K	5%	1/4W
R321	1-249-417-11	CARBON	1K	5%	1/4W
R322	1-249-417-11	CARBON	1K	5%	1/4W
R323	1-249-439-11	CARBON	68K	5%	1/4W
R324	1-247-843-31	CARBON	3.3K	5%	1/4W
R325	1-247-847-31	CARBON	4.7K	5%	1/4W
R326	1-249-429-11	CARBON	10K	5%	1/4W
R327	1-249-429-11	CARBON	10K	5%	1/4W
R328	1-249-429-11	CARBON	10K	5%	1/4W
R329	1-249-429-11	CARBON	10K	5%	1/4W
R330	1-249-419-11	CARBON	1.5K	5%	1/4W
R331	1-249-429-11	CARBON	10K	5%	1/4W
R332	1-249-426-11	CARBON	5.6K	5%	1/4W
R333	1-249-426-11	CARBON	5.6K	5%	1/4W
R334	1-247-847-31	CARBON	4.7K	5%	1/4W
R401	1-249-435-11	CARBON	33K	5%	1/4W
R402	1-249-433-11	CARBON	22K	5%	1/4W
R403	1-249-428-11	CARBON	8.2K	5%	1/4W
R404	1-249-422-11	CARBON	2.7K	5%	1/4W
R405	1-249-437-11	CARBON	47K	5%	1/4W
R406	1-249-422-11	CARBON	2.7K	5%	1/4W

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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REF. NO.	PART NO.	DESCRIPTION				REMARK
R407	1-249-435-11	CARBON	33K	5%	1/4W	
R408	1-247-881-00	CARBON	120K	5%	1/4W	
R409	1-249-433-11	CARBON	22K	5%	1/4W	
R410	1-249-419-11	CARBON	1.5K	5%	1/4W	
R411	1-247-886-11	CARBON	200K	5%	1/4W	
R412	1-249-438-11	CARBON	56K	5%	1/4W	
R413	1-249-428-11	CARBON	8.2K	5%	1/4W	
R414	1-247-733-11	CARBON	33	5%	1/2W	
R415	1-247-711-11	CARBON	680	5%	1/4W	
R416	1-249-430-11	CARBON	12K	5%	1/4W	
R417	1-247-843-31	CARBON	3.3K	5%	1/4W	
R418	1-249-408-11	CARBON	180	5%	1/4W	
R419	1-216-357-00	METAL OXIDE	4.7	5%	1W	
R420	1-249-419-11	CARBON	1.5K	5%	1/4W	
R421	1-249-409-11	CARBON	220	5%	1/4W	
R501	1-249-435-11	CARBON	33K	5%	1/4W	
R502	1-247-889-00	CARBON	270K	5%	1/4W	
R503	1-249-430-11	CARBON	12K	5%	1/4W	
R504	1-249-440-11	CARBON	82K	5%	1/4W	
R505	1-249-427-11	CARBON	6.8K	5%	1/4W	
R506	1-249-435-11	CARBON	33K	5%	1/4W	
R507	1-249-417-11	CARBON	1K	5%	1/4W	
⧓R508	⚠	CARBON		5%	1/4W	
⧓R509	⚠	CARBON		5%	1/4W	
R510	1-249-440-11	CARBON	82K	5%	1/4W	
R511	1-249-422-11	CARBON	2.7K	5%	1/2W	
R512	1-249-426-11	CARBON	5.6K	5%	1/4W	
R513	1-247-889-00	CARBON	270K	5%	1/4W	
R514	1-249-437-11	CARBON	47K	5%	1/4W	
R515	1-249-405-11	CARBON	100	5%	1/4W	
R516	1-249-437-11	CARBON	47K	5%	1/4W	
R517	1-247-754-11	CARBON	1.5K	5%	1/2W	
R518	1-247-688-11	CARBON	10	5%	1/4W	
R519	1-249-431-11	CARBON	15K	5%	1/4W	
R521	1-249-388-11	CARBON	3.9	5%	1/4W	
R522	1-247-740-11	CARBON	120	5%	1W	
R523	1-216-349-00	METAL OXIDE	1	5%	1W	
R524	1-247-688-11	CARBON	10	5%	1/4W	
R525	1-216-349-00	METAL OXIDE	1	5%	1W	
R526	1-249-417-11	CARBON	1K	5%	1/4W	
		<VARIABLE RESISTOR>				
RV301	1-228-994-00	RES, ADJ, CARBON 10K				
RV302	1-228-997-00	RES, ADJ, CARBON 100K				
RV303	1-228-993-00	RES, ADJ, CARBON 4.7K				
RV401	1-228-996-00	RES, ADJ, CARBON 47K				
RV402	1-228-989-00	RES, ADJ, CARBON 470				
RV403	1-228-991-00	RES, ADJ, CARBON 2.2K				
RV404	1-228-990-00	RES, ADJ, CARBON 1K				
RV405	1-228-990-00	RES, ADJ, CARBON 1K				
RV501	1-228-993-00	RES, ADJ, CARBON 4.7K				
RV502	1-228-995-00	RES, ADJ, CARBON 22K				
		<RELAY>				
RY501	9-905-667-01	RELAY				
		<TRANSFORMER>				
T501	9-905-665-01	TRANSFORMER HDT				
T502	⚠9-905-666-01	TRANSFORMER ASSY, FLYBACK				
**********						
	*9-905-690-01	C BOARD				
		*******				
		<CAPACITOR>				
C701	1-106-399-00	FILM	0.22MF		10%	200V
C702	1-130-710-00	FILM	0.1MF		20%	250V
C703	1-129-720-00	FILM	0.033MF		10%	630V
C704	1-129-720-00	FILM	0.033MF		10%	630V
		<RESISTOR>				
R701	1-249-496-11	CARBON	100K	5%	1/2W	
R702	1-247-752-11	CARBON	1K	5%	1/2W	
R703	1-247-760-11	CARBON	4.7K	5%	1/2W	
R704	1-247-760-11	CARBON	4.7K	5%	1/2W	
R705	1-247-893-11	CARBON	390K	5%	1/4W	
R706	1-247-760-11	CARBON	4.7K	5%	1/2W	
R707	1-247-903-11	CARBON	1M	5%	1/4W	
R708	1-246-541-00	CARBON	680K	5%	1/4W	(PVM-96/96E ONLY)
R708	1-249-437-11	CARBON	47K	5%	1/4W	(PVM-136/146E ONLY)
R710	1-249-424-11	CARBON	3.9K	5%	1/4W	
		<VARIABLE RESISTOR>				
RV701	9-905-689-01	RES, ADJ 2M				
RV702	9-905-688-01	RES, ADJ 1M				
		<SPARK GAP>				
SG701	1-519-422-11	GAP, SPARK 1K				
**********						
	*9-905-698-01	F BOARD				
		*******				
		<CONNECTOR>				
CN901	9-905-697-01	CONNECTOR 3P				
CN902	9-905-697-01	CONNECTOR 3P				
		<FUSE>				
F901	⚠1-532-745-11	FUSE, GLASS TUBE 3.15A/125V				(PVM-96/136 ONLY)
F901	⚠1-576-230-41	FUSE (H.B.C) T3.15A/250V				(PVM-96E/146E ONLY)
		<SWITCH>				
SW901	1-571-433-12	SWITCH, PUSH (AC POWER)				
**********						
	*9-905-683-01	G BOARD, COMPLETE				
		**********				
		<CAPACITOR>				
C501	1-130-487-00	FILM	0.022MF		5%	100V
C502	1-124-464-11	ELECT	0.22MF		20%	50V
C503	1-102-981-00	CERAMIC	300PF		5%	50V
C504	1-106-375-12	FILM	0.022MF		10%	100V

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G G2

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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REF. NO.	PART NO.	DESCRIPTION				REMARK
C505	1-106-375-12	FILM	0.022MF	10%	100V	
C506	1-106-375-12	FILM	0.022MF	10%	100V	
C601	1-136-185-00	FILM	0.22MF	20%	250V	
C602	1-136-185-00	FILM	0.22MF	20%	250V	
C603	1-161-973-00	CERAMIC	220PF	10%	400V	
C604	1-161-973-00	CERAMIC	220PF	10%	400V	
C605	1-161-973-00	CERAMIC	220PF	10%	400V	
C608	1-162-599-12	CERAMIC	4700PF	20%	400V	
C609	1-162-599-12	CERAMIC	4700PF	20%	400V	
C610	1-125-724-11	ELECT	180MF	20%	400V	
C611	1-136-206-21	FILM	0.033MF	10%	630V	
C612	1-126-803-11	ELECT	47MF	20%	50V	
C613	1-108-642-11	FILM	0.22MF	10%	100V	
C614	1-108-642-11	FILM	0.22MF	10%	100V	
C651	1-161-925-00	CERAMIC	100PF	10%	500V	
C652	1-124-922-11	ELECT	1000MF	20%	50V	
C653	1-124-920-11	ELECT	330MF	20%	50V	
C654	1-130-483-00	FILM	0.01MF	5%	100V	
		<CONNECTOR>				
CN610	*1-560-436-00	CONNECTOR 3P				
CN611	*1-564-518-11	CONNECTOR 3P				
		<DIODE>				
D601	8-719-911-19	DIODE 1SS119				
D602	8-719-911-19	DIODE 1SS119				
D603	8-719-970-87	DIODE ERA38-06				
D604	8-719-970-87	DIODE ERA38-06				
D605	8-719-110-53	DIODE RD20ESB2				
D651	8-719-971-08	DIODE ESAC39M-06C				
		<IC>				
IC601	8-759-637-30	IC M51978				
IC651	8-759-908-15	IC TL431CLP				
		<COIL>				
L601	9-905-681-01	LFT 38MMH				
L602	9-905-679-01	COIL, CHOKE LFT 13MMH				
L651	1-424-255-11	COIL, CHOKE 10UH				
L652	9-905-681-01	LFT 100UH				
		<PHOTO SENSOR>				
PH601⚠	8-719-159-90	PS2652-P				
		<TRANSISTOR>				
Q601	8-729-322-18	TRANSISTOR 2SK1402A				
		<RESISTOR>				
R501	1-249-441-11	CARBON	100K	5%	1/4W	
R502	1-249-417-11	CARBON	1K	5%	1/4W	
R503	1-249-433-11	CARBON	22K	5%	1/4W	
R504	1-247-887-00	CARBON	220K	5%	1/4W	
R505	1-249-433-11	CARBON	22K	5%	1/4W	
R506	1-249-432-11	CARBON	18K	5%	1/4W	
R507	1-249-397-11	CARBON	22	5%	1/6W	
R601	1-216-411-11	CEMENT	1.5	5%	5W	F
R602	1-216-411-11	CEMENT	1.5	5%	5W	F
R603	1-215-904-11	METAL OXIDE	100K	5%	2W	
R604	1-215-904-11	METAL OXIDE	100K	5%	2W	
R605	1-212-865-00	FUSIBLE	22	5%	1/4W	
R606	1-249-404-00	CARBON	82	5%	1/4W	
R607	1-260-128-91	CARBON	270K	5%	1/4W	
R608	1-260-128-91	CARBON	270K	5%	1/4W	
R609	1-215-904-11	METAL OXIDE	100K	5%	2W	
R610	1-216-341-11	WIREWOUND	0.22	10%	3W	
R611	1-249-396-11	CARBON	18	5%	1/4W	
R612	1-249-399-11	CARBON	33	5%	1/4W	
R613	1-215-904-11	METAL OXIDE	100K	5%	2W	
R651	1-215-886-11	METAL OXIDE	100	5%	2W	
R652	1-215-886-11	METAL OXIDE	100	5%	2W	
R653	1-260-107-11	CARBON	4.7K	5%	1/4W	
R654	1-260-107-11	CARBON	4.7K	5%	1/4W	
R655	1-249-435-11	CARBON	33K	5%	1/4W	
R656	1-249-433-11	CARBON	22K	5%	1/4W	
R657	1-249-422-11	CARBON	2.7K	5%	1/4W	
R658	1-249-423-11	CARBON	3.3K	5%	1/4W	
R666	1-218-265-11	METAL OXIDE	8.2M	5%	1W	
		<VARIABLE RESISTOR>				
⧓RV651⚠	1-228-744-11	RES, ADJ, CARBON 470				
		<TRANSFORMER>				
T601	9-905-682-01	TRANSFORMER, CONVERTER				
**********						
	*9-905-708-01	G2 BOARD, COMPLETE				
		**********				
		<CAPACITOR>				
C670	1-102-973-00	CERAMIC	100PF	10%	100V	
C671	1-124-910-11	ELECT	47MF	20%	50V	
C672	1-123-382-00	ELECT	3.3MF	20%	50V	
C673	1-124-927-11	ELECT	4.7MF	20%	50V	
		<CONNECTOR>				
CN601	*1-564-521-11	CONNECTOR 6P				
		<DIODE>				
D670	8-719-100-41	DIODE RD15ESB2				
D671	8-719-911-19	DIODE 1SS119				
D672	8-719-911-19	DIODE 1SS119				
		<TRANSISTOR>				
Q670	8-729-304-06	TRANSISTOR 2SA1488-O				
Q671	8-729-173-38	TRANSISTOR 2SA733-K				
Q672	8-729-281-53	TRANSISTOR 2SC1815-GR				
Q673	8-729-281-53	TRANSISTOR 2SC1815-GR				
Q674	8-729-281-53	TRANSISTOR 2SC1815-GR				
Q675	8-729-281-53	TRANSISTOR 2SC1815-GR				
		<RESISTOR>				
R670	1-247-700-11	CARBON	100	5%	1/4W	F

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G2 H Q

REF. NO.	PART NO.	DESCRIPTION				REMARK
R671	1-249-399-11	CARBON	33	5%	1/4W	
R672	1-247-855-11	CARBON	10K	5%	1/4W	
R673	1-249-417-11	CARBON	1K	5%	1/4W	
R674	1-249-417-11	CARBON	1K	5%	1/4W	
R675	1-249-425-11	CARBON	4.7K	5%	1/4W	
R676	1-249-425-11	CARBON	4.7K	5%	1/4W	
R677	1-247-897-11	CARBON	560K	5%	1/4W	
R678	1-249-459-11	CARBON	12K	5%	1/4W	
R679	1-249-425-11	CARBON	4.7K	5%	1/4W	
R680	1-249-423-11	CARBON	3.3K	5%	1/4W	
R681	1-249-414-11	CARBON	560	5%	1/4W	
R682	1-247-891-00	CARBON	330K	5%	1/4W	
R683	1-249-433-11	CARBON	22K	5%	1/4W	
R684	1-249-432-11	CARBON	18K	5%	1/4W	
R685	1-247-855-11	CARBON	10K	5%	1/4W	
R686	1-249-441-11	CARBON	100K	5%	1/4W	
R687	1-249-427-11	CARBON	6.8K	5%	1/4W	
R688	1-249-420-11	CARBON	1.8K	5%	1/4W	
		<VARIABLE RESISTOR>				
RV670	1-249-425-11	RES, ADJ, CARBON 4.7K				
**********						
	*9-905-695-01	H BOARD				
		*******				
		<DIODE>				
D801	9-996-328-01	DIODE KLG124E				
		<RESISTOR>				
R801	1-249-419-11	CARBON	1.5K	5%	1/6W	
R802	1-249-431-11	CARBON	15K	5%	1/4W	
R803	1-249-433-11	CARBON	22K	5%	1/6W	
R804	1-249-432-11	CARBON	18K	5%	1/4W	
R805	1-249-433-11	CARBON	22K	5%	1/4W	
		<VARIABLE RESISTOR>				
RV801	9-905-693-01	20K				
RV802	9-905-691-01	500B				
RV803	9-905-694-01	100K				
RV804	9-905-693-01	20K				
RV805	9-905-693-01	20K				
		<SWITCH>				
SW801	1-554-419-00	SWITCH, PUSH (1 KEY)				
SW802	1-554-419-00	SWITCH, PUSH (1 KEY)				
SW803	1-554-419-00	SWITCH, PUSH (1 KEY)				
SW804	1-554-419-00	SWITCH, PUSH (1 KEY)				
SW805	1-554-419-00	SWITCH, PUSH (1 KEY)				
SW806	1-554-419-00	SWITCH, PUSH (1 KEY)				
**********						
	*9-904-707-01	Q BOARD, COMPLETE				
		**********				
	*9-905-687-01	TERMINAL ASSY, INPUT OUTPUT				
	⚠1-560-222-21	INLET, AC				

REF. NO.	PART NO.	DESCRIPTION				REMARK
		<CAPACITOR>				
C101	1-126-964-11	ELECT	10MF	20%	16V	
C102	1-126-233-11	ELECT	22MF	20%	16V	
C103	1-101-004-00	CERAMIC	0.01MF		50V	
C104	1-126-233-11	ELECT	22MF	20%	16V	
C105	1-126-233-11	ELECT	22MF	20%	16V	
C106	1-126-233-11	ELECT	22MF	20%	16V	
C107	1-101-004-00	CERAMIC	0.01MF		50V	
C108	1-126-233-11	ELECT	22MF	20%	16V	
C109	1-126-233-11	ELECT	22MF	20%	16V	
C110	1-126-964-11	ELECT	10MF	20%	16V	
C111	1-126-964-11	ELECT	10MF	20%	16V	
C112	1-101-004-00	CERAMIC	0.01MF		50V	
C113	1-126-233-11	ELECT	22MF	20%	16V	
C114	1-126-233-11	ELECT	22MF	20%	16V	
C115	1-126-233-11	ELECT	22MF	20%	16V	
C117	1-101-004-00	CERAMIC	0.01MF		50V	
C118	1-126-233-11	ELECT	22MF	20%	16V	
C119	1-126-964-11	ELECT	10MF	20%	16V	
C120	1-124-464-11	ELECT	0.22	20%	50V	
C121	1-126-233-11	CERAMIC	0.01MF	20%	50V	
C122	1-124-233-11	ELECT	22MF	20%	16V	
C123	1-126-964-11	ELECT	10MF	20%	16V	
C124	1-124-251-11	ELECT	0.22MF	20%	50V	
C125	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C126	1-124-464-51	ELECT	0.22MF	20%	50V	
C127	1-126-157-11	ELECT	10MF	20%	16V	
C128	1-126-157-11	ELECT	10MF	20%	16V	
C129	1-108-812-11	FILM	0.047MF	5%	50V	
C130	1-124-120-11	ELECT	220MF	20%	16V	
C131	1-124-120-11	ELECT	220MF	20%	16V	
C132	1-124-120-11	ELECT	220MF	20%	16V	
C133	1-124-910-11	ELECT	47MF	20%	50V	
C134	1-126-969-11	ELECT	220MF	20%	25V	
C135	1-124-464-11	ELECT	0.22MF	20%	50V	
C136	1-126-964-11	ELECT	10MF	20%	50V	
C137	1-101-004-00	CERAMIC	0.01MF		50V	
C138	1-101-004-00	CERAMIC	0.01MF		50V	
C139	1-126-964-11	ELECT	10MF	20%	50V	
C144	1-126-964-11	ELECT	10MF	20%	16V	
		<CONNECTOR>				
CN101	*9-905-675-01	CONNECTOR 8P				
CN102	*9-905-673-01	CONNECTOR 6P				
CN103	*9-905-671-01	CONNECTOR 3P				
CN104	*9-905-670-01	CONNECTOR 2P				
CN105	*9-905-697-01	CONNECTOR 3PL				
CN106	*9-905-671-01	CONNECTOR 3P				
		<DIODE>				
D106	8-719-911-19	DIODE 1SS119				
D107	8-719-911-19	DIODE 1SS119				
D111	8-719-911-19	DIODE 1SS119				
D112	8-719-911-19	DIODE 1SS119				
D113	8-719-911-19	DIODE 1SS119				
D114	8-719-911-19	DIODE 1SS119				
D115	8-719-911-19	DIODE 1SS119				
D116	8-719-911-19	DIODE 1SS119				
D117	8-719-911-19	DIODE 1SS119				
D118	8-719-911-19	DIODE 1SS119				
D119	8-719-911-19	DIODE 1SS119				

Q X

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REF. NO.	PART NO.	DESCRIPTION				REMARK
D120	8-719-911-19	DIODE 1SS119				
D121	8-719-911-19	DIODE 1SS119				
D122	8-719-911-19	DIODE 1SS119				
D123	8-719-911-19	DIODE 1SS119				
D124	8-719-911-19	DIODE 1SS119				
D125	8-719-150-56	DIODE RD12EB2				
D126	8-719-911-19	DIODE 1SS119				
D127	8-719-109-89	DIODE RD5.6ESB2				
		<IC>				
IC101	8-759-800-81	IC LA7016				
IC102	8-759-800-81	IC LA7016				
IC103	8-759-800-81	IC LA7016				
IC104	8-759-420-04	IC AN5265				
		<TRANSISTOR>				
Q101	8-729-281-53	TRANSISTOR 2SC1815-GR				
Q102	8-729-281-53	TRANSISTOR 2SC1815-GR				
Q103	8-729-281-53	TRANSISTOR 2SC1815-GR				
Q106	8-729-173-38	TRANSISTOR 2SA733-K				
Q107	8-729-173-38	TRANSISTOR 2SA733-K				
Q108	8-729-173-38	TRANSISTOR 2SC2235				
Q109	8-729-281-53	TRANSISTOR 2SC1815-GR				
		<RESISTOR>				
R101	1-247-804-11	CARBON	75	5%	1/6W	
R102	1-249-417-11	CARBON	1K	5%	1/4W	
R103	1-249-439-11	CARBON	68K	5%	1/4W	
R104	1-249-438-11	CARBON	56K	5%	1/4W	
R105	1-249-421-11	CARBON	2.2K	5%	1/4W	
R106	1-249-411-11	CARBON	330	5%	1/4W	
R107	1-249-405-11	CARBON	100	5%	1/4W	
R108	1-249-433-11	CARBON	22K	5%	1/4W	
R109	1-249-433-11	CARBON	22K	5%	1/4W	
R110	1-249-405-11	CARBON	100	5%	1/4W	
R111	1-249-411-11	CARBON	330	5%	1/4W	
R112	1-249-421-11	CARBON	2.2K	5%	1/4W	
R113	1-249-438-11	CARBON	56K	5%	1/4W	
R114	1-249-439-11	CARBON	68K	5%	1/4W	
R115	1-249-417-11	CARBON	1K	5%	1/4W	
R116	1-247-804-11	CARBON	75	5%	1/6W	
R117	1-249-417-11	CARBON	1K	5%	1/4W	
R118	1-249-439-11	CARBON	68K	5%	1/4W	
R119	1-249-433-11	CARBON	22K	5%	1/4W	
R120	1-249-433-11	CARBON	22K	5%	1/4W	
R121	1-249-430-11	CARBON	12K	5%	1/4W	
R123	1-249-411-11	CARBON	330	5%	1/4W	
R124	1-249-438-11	CARBON	56K	5%	1/4W	
R125	1-247-804-11	CARBON	75	5%	1/6W	
R126	1-249-421-11	CARBON	2.2K	5%	1/4W	
R127	1-249-430-11	CARBON	12K	5%	1/4W	
R128	1-249-437-11	CARBON	47K	5%	1/4W	
R129	1-249-437-11	CARBON	47K	5%	1/4W	
R130	1-249-437-11	CARBON	47K	5%	1/4W	
R131	1-249-437-11	CARBON	47K	5%	1/4W	
R132	1-249-417-11	CARBON	1K	5%	1/4W	
R133	1-249-417-11	CARBON	1K	5%	1/4W	
R134	1-249-437-11	CARBON	47K	5%	1/4W	
R135	1-247-897-11	CARBON	560K	5%	1/4W	
R136	1-249-431-11	CARBON	15K	5%	1/4W	
R137	1-249-441-11	CARBON	100K	5%	1/4W	
R138	1-247-887-00	CARBON	220K	5%	1/4W	
R139	1-249-405-11	CARBON	100	5%	1/4W	
R140	1-247-897-11	CARBON	560K	5%	1/4W	
R141	1-249-431-11	CARBON	15K	5%	1/4W	
R142	1-249-441-11	CARBON	100K	5%	1/4W	
R143	1-214-921-00	CARBON	220K	5%	1/2W	
R144	1-249-405-11	CARBON	100	5%	1/4W	
R145	1-249-421-11	CARBON	2.2K	5%	1/4W	
R146	1-247-855-11	CARBON	10K	5%	1/4W	
R147	1-249-435-11	CARBON	33K	5%	1/4W	
R148	1-247-711-11	CARBON	680	5%	1/4W	
R149	1-249-389-11	CARBON	4.7	5%	1/4W	
R150	1-249-435-11	CARBON	33K	5%	1/4W	
R151	1-249-433-11	CARBON	22K	5%	1/4W	
R152	1-249-424-11	CARBON	3.9K	5%	1/4W	
R153	1-249-393-11	CARBON	10	5%	1/4W	
R154	1-249-389-11	CARBON	4.7	5%	1/4W	
R155	1-249-417-11	CARBON	1K	5%	1/4W	
R156	1-249-409-11	CARBON	220	5%	1/4W	
R157	1-249-439-11	CARBON	68K	5%	1/4W	
R158	1-249-439-11	CARBON	68K	5%	1/4W	
R159	1-249-441-11	CARBON	100K	5%	1/4W	
R160	1-249-426-11	CARBON	5.6K	5%	1/4W	
	9-905-696-01	X BOARD				
		*******				
		<DIODE>				
D001	8-719-023-78	DIODE LED SEL3810DLC05				
D002	8-719-023-78	DIODE LED SEL3810DLC05				
D003	8-719-023-78	DIODE LED SEL3810DLC05				
		MISCELLANEOUS				
		************				
	1-544-063-11	SPEAKER				
	⚠1-560-222-21	INLET, AC				
F501	⚠1-532-203-11	FUSE, TIME-LAG 2A/250V				(PVM-96E/146E ONLY)
F501	⚠1-532-743-11	FUSE, GLASS TUBE 2A/125V				(PVM-96/136 ONLY)
F901	⚠1-532-745-11	FUSE, GLASS TUBE 3.15A/125V				(PVM-96/136 ONLY)
F901	⚠1-576-230-41	FUSE (H.B.C) T3.15A/250V				(PVM-96E/146E ONLY)
L901	⚠9-905-699-01	DEFLECTION YOKE				
T502	⚠9-905-666-01	TRANSFORMER ASSY, FLYBACK				
V901	⚠9-905-701-01	PICTURE TUBE C-9D01SWH1				(PVM-96/96E ONLY)
V901	⚠9-905-703-01	PICTURE TUBE C-14D01SWH1				(PVM-136/146E ONLY)
		ACCESSORIES & PACKING MATERIALS				
		********************************				
		<PVM-96/96E>				
	⚠1-551-812-11	CORD, POWER 7A/125V				(PVM-96 ONLY)
	⚠1-590-910-11	CORD SET, POWER 10A/250V				(PVM-96E ONLY)
	*2-990-241-02	HOLDER (A), PLUG				
	*2-990-242-01	HOLDER (B), PLUG				(PVM-96 ONLY)
	*3-170-078-01	HOLDER (B), PLUG				(PVM-96E ONLY)
	*3-704-296-01	BAG, PROTECTION				
	3-708-670-21	MANUAL, INSTRUCTION				(PVM-96 ONLY)
	3-708-670-41	MANUAL, INSTRUCTION				(PVM-96E ONLY)
	*3-708-713-01	INDIVIDUAL CARTON				(PVM-96 ONLY)

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK
	*3-708-715-01	INDIVIDUAL CARTON	(PVM-96E ONLY)
	*3-708-722-01	CUSHION (LEFT UPPER)	
	*3-708-723-01	CUSHION (RIGHT LOWER)	
	*3-708-724-01	CUSHION (RIGHT UPPER)	
	*3-708-725-01	CUSHION (LEFT LOWER)	
	1-690-871-11	REMOTE CONNECTOR (8-PIN MINI DIN)	
		<PVM-136/146E>	
	⚠1-551-812-11	CORD, POWER 7A/125V	(PVM-136 ONLY)
	⚠1-590-910-11	CORD, POWER 10A/250V	(PVM-146E ONLY)
	*2-990-241-02	HOLDER (A), PLUG	
	*2-990-242-01	HOLDER (B), PLUG	(PVM-136 ONLY)
	*3-170-078-01	HOLDER (B), PLUG	(PVM-146E ONLY)
	*3-704-302-01	BAG, PROTECTION	
	3-708-670-21	MANUAL, INSTRUCTION	(PVM-136 ONLY)
	3-708-670-41	MANUAL, INSTRUCTION	(PVM-146E ONLY)
	*3-708-718-01	INDIVIDUAL CARTON	(PVM-136 ONLY)
	*3-708-721-01	INDIVIDUAL CARTON	(PVM-146E ONLY)
	*3-708-743-01	CUSHION (LEFT LOWER)	
	*3-708-744-01	CUSHION (RIGHT UPPER)	
	*3-708-745-01	CUSHION (RIGHT LOWER)	
	*3-708-753-01	CUSHION (LEFT UPPER)	
	*4-041-648-01	PLATE, TALLY	
	1-690-871-11	REMOTE CONNECTOR (8-PIN MINI DIN)	